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MEDICINE A FUNCTION OF THE STATE*

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INTRODUCTORY

The Council on Medical Education nine years ago formulated a standard of medical education which it believed should be adopted in this country as a minimum standard. This standard was approved by the American Medical Association in 1905 as the standard which should ultimately be adopted. It is as follows:

1. Preliminary education sufficient to enable the candidate to enter our recognized universities.

2. A five-year medical course, the first year of which should be devoted to physics, chemistry and biology, this year to be taken either in a school of liberal arts or in the medical school.

3. A sixth year as an intern in a hospital.

PROGRESS IN NINE YEARS

Under such a scheme the majority of men would begin the study of medicine between 18 and 19 years of age and finish their hospital internship at 25. A full college education was recognized as a desirable preparation for a limited number of men, but it was agreed that it should never be made an absolute requirement for admission to the study of medicine, as it would make the age of graduation 27 or 28 years — too old an age for the physician to begin medical work.

For the last nine years the Council on Medical Education and this conference have worked steadily and untiringly to bring about the adoption of this standard, and they have succeeded so far that this general adoption is now clearly in sight. When the conference began its work there were 28,000 medical students in this country. There were last year but 17,000. Then there were 160 medical colleges; now there are but 100. Then there were but four schools requiring more than a high-school education for admission; now there are eighty. Then no state licensing board required more than a high-school education; now sixteen state boards require one or two years of college work, including courses in physics, chemistry and biology. Nine years ago only a limited number of men secured hospital internships; now almost all the men graduating from the better schools serve a year or more as a hospital intern. Twenty-six state boards have withdrawn recognition from the twenty-five or thirty poor schools which are not doing acceptable work. We are clearly in sight of American standards of medical education which will not only be satisfactory, but which will compare favorably with those of England, France and Germany.

IMPROVEMENTS INSPIRED BY MEDICAL MEN

These improvements in standards have been accompanied by great improvements in the laboratory and clinical facilities in our medical schools, by the passing of the proprietary schools and by the development of the university medical school, especially the medical school as a part of the state university. Almost all that has so far been accomplished in medical education in this country has been the result of work by the medical men themselves. Very little assistance has been secured from persons outside of the profession. For a time a good deal of effort was made to secure private endowment for medical education, but with little success except in a few fortunate instances.

STATE SUPPORT OF MEDICAL EDUCATION

Until recent years wealthy philanthropists have not favored medical education as they have general education, theology, hospitals and libraries. There was a long period in the world's history when literature, art and education flourished only under the support of some rich patron and were objects of his favor and caprice. In this country as medical schools emerged out of the proprietary school stage and sought university connections, some of them turned to private persons for financial support, and in some instances such private support has been secured. On the whole, however, medical schools have not been able to secure adequate financial support from private endowments. Furthermore, a comparative study of the medical schools of the world gives no reason to expect adequate support for medicine from private endowment. Nor is it desirable that medicine should depend on private support. There will always remain the great privilege and great opportunity for private endowment to assist medical education, medical research and medical charities, but the scheme of modern medicine can no longer wait for private endowment.

Medicine has become not only a function of the state, but also one of the most important functions of the state. The time has now come when the medical profession should no longer look to private endowment but to the state for the support of medical education and research. In the interest of the people we should demand adequate state support for medicine in order that medicine in return may properly perform its great function to the state and that the people may benefit from the great possibilities offered by preventive medicine, intelligent medical practice and medical research.

* Portion of chairman's address at the Tenth Annual Conference of the Council on Medical Education, Chicago, Feb. 24, 1914.

MEDICINE, A FUNCTION OF THE STATE

I wish to present for your consideration this thought: Medicine, a function of the state. In order to obtain the proper perspective of this subject let us analyze the situation of medicine and medical education in the older countries of Europe.

Most of the European universities were founded as private institutions under the patronage of this or that archbishop or duke or as free universities in certain cities. Many of them were religious institutions, Catholic, Lutheran, etc. In the course of years almost all of these universities have become state institutions, and inasmuch as the medical schools of Europe with few exceptions are the medical departments of universities, what is true of the universities is also true of the medical schools. If we look over the medical schools of Europe we shall find that the following is the situation:

In Germany all universities are state institutions; in the ten Prussian universities each medical student costs the state from $450 to $500 a year for his education.

In Austria, Hungary and Switzerland all are state institutions.

In Holland, all are state institutions except one, a municipal university at Amsterdam.

In Denmark, the University of Copenhagen receives state aid.

In Sweden, all are state universities.

In Norway, all are under state control.

In Great Britain, the universities were created as private institutions but are rapidly passing under state control with the exception of Oxford, Cambridge and a few others.

In France, all are state universities or under state control.

In Belgium, there are state universities at Ghent and Liege, a free university at Brussels, and a Catholic university at Louvain.

In Italy, there are sixteen state universities and four free universities.

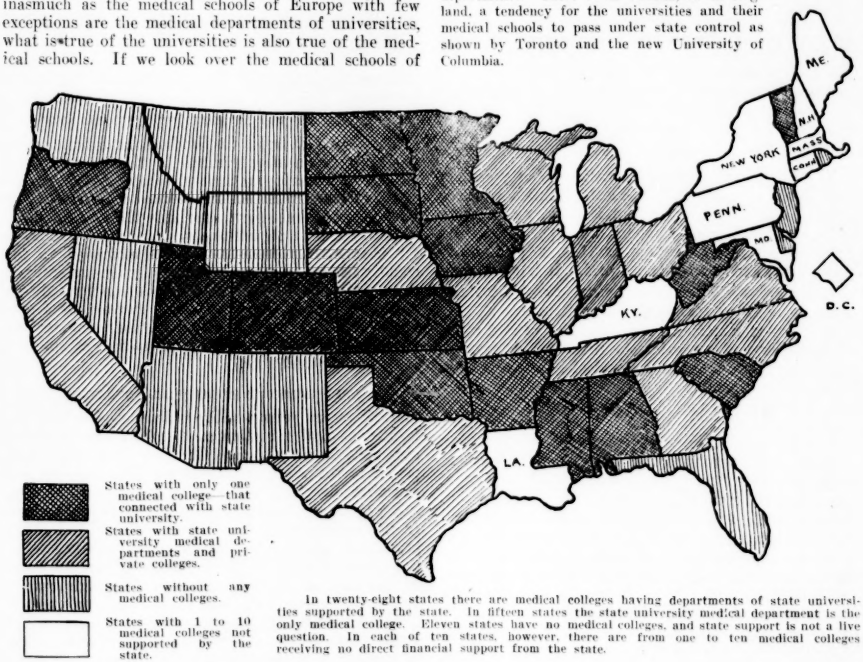
In Spain, Portugal, Russia, Greece and the Balkan States, all are state universities.

In the South American Republics, as a whole, all are state universities or under state control.

In Japan, all are state universities.

In Australia, all have state aid.

Canada has eight medical schools. The University of Toronto is a strong university under state control. The new University of British Columbia is being developed with state aid; the other universities are private institutions, and, with the exception of McGill, all have comparatively weak medical departments. There is in Canada, as in England, a tendency for the universities and their medical schools to pass under state control as shown by Toronto and the new University of Columbia.



In twenty-eight states there are medical colleges having departments of state universities supported by the state. In fifteen states the state university medical department is the only medical college. Eleven states have no medical colleges, and state support is not a live question. In each of ten states, however, there are from one to ten medical colleges receiving no direct financial support from the state.

In the United States there are fifty states, counting the District of Columbia and the Philippine Islands.

It is extremely interesting to note in the chart the extent of state control and state aid of the medical schools in these fifty states. The chart shows that there are no medical schools in eleven states and that in twenty-nine states, counting the Philippines, state funds are given for the support of medical education. Because of the very large amount which Pennsylvania gives to hospitals and indirectly to medical education we might very properly include Pennsylvania. If we include the assistance given by municipalities in the way of supporting teaching hospitals for medical education, we might also include Kentucky and Louisiana. This leaves only six states (Maine, New Hampshire, Massachusetts, Connecticut, New York and Maryland) and the District of Columbia in which medical education as a function of the state has not been recognized nor any

state aid given for its support. I understand that a bill has been introduced in Maryland to create a state university. The recognition by the state of medical education as a state function has come about so gradually and so naturally that its real significance and great importance have escaped the notice of most of us. When we analyze the whole problem and review the conditions and tendencies of medicine and medical education the world over we cannot escape the conclusion that medicine is rapidly becoming an important function of the state. What will this mean? It will mean state control and state support for public health, for medical licensure, for medical education, for medical research and to an increasing extent the medical care of the helpless.

The word "state" might be used in the broader sense so as to include municipal, state or national government. The constitution provides that public health and education are reserved as functions of the individual states. The American Medical Association has for years been striving to secure a national board of health. However important this is or would be, it is overshadowed in importance by the need of securing an efficient state licensing board in each state, and the importance of securing in each state the proper development of the functions of medicine, such as medical licensure, education and research. Our big problem is to create a public opinion by a campaign of education showing the great possibilities of modern scientific medicine. We must show what good can be accomplished both for the individual and for the community by efficient public health service, by well-trained practitioners and by medical research; and when we have educated the people we will have no difficulty in securing the necessary laws, machinery and funds to make medicine, in the best sense, a great function of the state. In developing this idea we must make one absolute condition, and this is that state medicine must be under non-political control safeguarded and out of reach of politics and placed on a scientific and educational basis, just as much so as is the United States Public Health Service to-day. When this idea is properly worked out of making medicine a function of the state in a thoroughly modern and complete sense, what will it mean? It will mean, first, a state health service with well-equipped laboratories, and commissioners of health in every county of the state with large authority, giving to the people the benefits of modern preventive medicine liberally supported by state funds. It will mean, secondly, a board of medical licensure with authority to demand thorough training of candidates who desire to practice medicine in the state and with power to protect the people against medical ignorance and inefficiency. It will mean, thirdly, a strong medical department of the state university situated, if possible, in the largest center of population in the state, provided with adequate plant and necessary funds and in medical control of the great state and municipal hospitals, eye and ear infirmaries, insane asylums, special hospitals, maternity hospitals and children's hospitals, so that the educational function of these institutions may be realized. Then the patients will be benefited by high-class medical service, and medical students and nurses will be given the best possible training. Fourthly, it will mean that in association with each department of the medical school and in all these charity hospitals there will be thoroughly equipped research laboratories.

In the future when medical education has become a state function, the great advances and discoveries made in medicine in this country will come largely from the research workers in the medical departments of the state universities, from the great hospitals affiliated with them, and from the state boards of health. There should be a close working relationship between the state board of health, the county boards of health, the state university and the great charity hospitals; and, lastly, when we speak of medicine as a function of the state we must include the medical care of the submerged 10 or 20 per cent. of the population which does not and cannot provide proper medical care for itself. We are every day coming nearer the time when in this country we shall see laws enacted to provide, by some state insurance scheme, medical care for the poor as has been done for some years in Germany and as has recently been done in England. If the profession in this country is far sighted it will recognize these coming events and direct them wisely.

If this condition is brought about what will be the place of the medical schools in the older states such as Harvard in Massachusetts, Yale in Connecticut, Columbia and the others in New York? These schools will voluntarily become a part of the great machinery that will carry on properly for the state the function of medicine. Take as a concrete example Harvard. Harvard should so affiliate itself with the state board of health work of the state of Massachusetts, with the educational and research functions of the great state and municipal charities, that it can for such purposes carry on the functions of a great state medical school. In this work it should receive the support and recognition by the state.

In this conference we have almost every state of the Union represented. Let every delegate here carry back to his state this new gospel of American medicine, Medicine a Function of the State. The state board of health, the state licensing board, our great state and municipal charity hospitals and the medical department of the state university must be given adequate state support, must be put on a scientific and educational basis and must be taken out of politics and away from political influences.

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THE DANGER TO THE MAINTENANCE OF HIGH STANDARDS FROM EXCESSIVE FORMALISM *

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Every professional school ought to have two distinct objects — one the recruiting of the best talent that can be obtained among young men, and the other giving to them the best preparation for the career in which they are about to take part. These two objects are not of necessity inconsistent, but they do not always go together, and neither of them should be allowed to obscure the other. It is, indeed, one of the characteristic differences between education on the two sides of the Atlantic that Europe tends to a system of competition which selects the stronger men and eliminates the weak, while we, more democratic in spirit, fix our attention almost exclusively on the process of training

* Read before the Tenth Annual Conference of the Council on Medical Education, Chicago, Feb. 24, 1914.

that the men are to be put through. In this paper premedical education will be discussed from both points of view.

It would be presumptuous in me to question the validity of medical opinion on the content of the necessary premedical education, but one may properly inquire how well the rules adopted by this association are fitted to attain the object sought, and how far they may have the effect of excluding able men from the profession. It is needless to go so far back as the high school curriculum, because the subjects prescribed therefor are not especially premedical, and provide a good general education for any subsequent career. My concern is the rules adopted at the joint meeting last March of the Committee of the Association of American Medical Colleges and the Council of the American Medical Association about the courses to be taken in college. The requirements are one course each in physics, chemistry and biology, with a prescribed number of lectures and appropriate laboratory work; also a couple of courses in German or French aggregating three or four hours a week for the year. To what extent are these necessary or sufficient to give the preparation needed for medical study?

A concrete example will illustrate the bearing of the question. When a child, I spent a couple of years at school in France, could read the language easily and took no course therein at college. On the other hand, I took a course in German, but did not learn to read it well enough to be of any real use, and taught myself to do so in later life. If, therefore, I had sought to enter a medical school under these new rules, I should not have been qualified in French, which I could read, but might have been qualified in German, which I could not read. I say, might have been qualified, because I do not remember that the course in German was as extensive as required by these rules, but our experience at Harvard shows that this would probably have made no essential difference.

We oblige every student who does not pass an examination for entrance to Harvard College in both French and German, to take, in the language that he does not pass, a course equal to the minimum your new rules prescribe. Nevertheless, we have found the students commonly unable to use foreign books, and hence have recently required them to take an oral examination in reading either French or German. Each of them selects, of course, the language in which he is the least deficient, and yet on the average one-half of them fail. Such a result shows that the course in language your rules prescribe will by no means insure the attainment of its object — that is, the ability to use foreign books — while it may exclude a man who can use them perfectly well and has not complied with this condition for admission to a medical school for the very reason that he can use them. No doubt, the framers of these rules did not intend to compel such a man to go through the form of taking a course in a subject with which he is already familiar, and yet they made no provision for exception in his case.

Although less strikingly evident, the same thing is true in the case of the scientific requirements. Everyone knows that to pass a course with the minimum mark in one's freshman year in college indicates only a small knowledge and feeble grasp of the subject, and that even this may have disappeared well-nigh altogether by the time of graduation. But it is enough to comply with the formula, and, therefore, admits to the medical school; while a knowledge and grasp perhaps much larger, acquired by a more mature man in a shorter space of time, will not comply with the formula, and, so, will not admit. Let me explain this.

A college education which has any value in training the mind must make men more capable of grappling with difficult subjects than they were before, and, consequently, must fit them to acquire mastery of a subject more rapidly than before they went to college. If so, a man ought to be able to learn a certain amount of physics, chemistry or biology in a shorter period and with less hours of lectures and laboratory work in his senior year than in his freshman year. What is more, he will present it when it is still fresh in his mind, whereas if he has taken it as a freshman, and then spent three years on other subjects, he will certainly have forgotten a great deal of the little that he learned. Yet for admission to the medical school the prescribed course taken in the freshman year is enough, while a shorter but more efficient course taken in the senior year or after graduation is not enough. We are to ask not what a man knows, but whether he has at any time taken a course with a fixed number of hours of lectures and laboratory work. In short, you are requiring not a result but a process; you are ascertaining not whether the man has a proper preparation for the study of medicine, but whether he has gone through a régime of training which may in ordinary cases secure the result desired, but which is sometimes not necessary for the purposes, and often inadequate. You are using a rough mechanical test which is inaccurate on both sides, instead of a personal test which would be far more accurate. Surely if an elementary knowledge of physics, chemistry, and biology is absolutely essential before a man begins to study the subjects taught in the medical school, it would be possible to find out whether he has that knowledge by examining him; and surely you can trust the medical schools on your accredited list to conduct such an examination; or, if you cannot trust them, you can inspect their examination in such a way as to see that it is thorough.

The mere fact that the test by courses taken is inaccurate, in that it lets in a certain number of men inadequately qualified, is only half, and perhaps not the most serious half, of the evil. The inaccuracy works both ways, and the fact that the test by courses may be fairly effective on the average does not justify it. A dying lawyer in remorse that his eloquence had enabled many guilty men to escape is said to have consoled himself with the reflection that the same eloquence had also sent many innocent men to the gallows, so that on the average justice had been done. Like his eloquence, the rule requiring certain courses to be taken in college for admission to the medical school does a double harm. It lets in men whose scientific preparation does not reach the standard desired, and it is liable to exclude a good many excellent recruits for the profession who have not selected their courses in college with a view to a medical career.

I know that many people, and among them members of the medical profession, hold a fatalistic theory of education. They believe that men are born to be physicians and surgeons, or at least are inoculated with the virus young, so that there is no need of taking into consideration men in whom the impulse toward medicine has not displayed itself early and forcibly. But like all theories, this is only in part true. No doubt, many men select their careers at an early age, but, on

the other hand, any one familiar with college students knows that it is by no means always the case. Often men of rare quality do not know what their career in life is to be until toward the close of their college years; in occasional cases not even then. Nor is medicine a complete exception to the rule. Anyone here can probably recall cases of eminent practitioners who did not decide to enter a medical school, and did not elect scientific courses in college, until too late to comply with these rules.

Some light may be thrown on this point by statistics compiled at Harvard a few years ago to measure the relative effect on work in the professional schools of high scholarship in college and of the pursuit of particular subjects of study.[1] The figures for the medical school cover sixteen years, and comprise the three hundred and sixty-five alumni of Harvard College who graduated from the school during that period.

It appeared that the proficiency in the first-year medical courses in anatomy and histology was roughly in proportion to the amount of science taken in college. But this initial advantage did not last long, and disappeared altogether when at graduation the *cum laude* was awarded for the work in the school as a whole. In fact, the percentage of *cum laude* degrees in medicine was almost exactly the same for the men who had concentrated their college electives in natural science and for those who had concentrated in other subjects. It was 51.2 per cent. in one case, and 52.1 per cent. in the other. Curiously enough the men who took less than three courses in natural science actually did a little better than those who had taken a very large amount of it.

One must not base too definite conclusions on these figures, but certainly they go far to show that a large amount of scientific preparation is not an essential, or indeed a highly important preparation for medical studies, and that a small amount is not a hindrance to successful work. No doubt a certain command of chemistry, for example, is necessary; and every physician at the present day ought to be thoroughly familiar with the principles of physics as well as of chemistry and biology. But this may be acquired in ways other than college courses.

The relation of rank in college to the work in the medical school proved, on the other hand, to be highly significant. Of the men who graduated from college without distinction only a little over one-third won a *cum laude* in the medical school; whereas, of those who achieved distinction in college, over four-fifths obtained a *cum laude* in the medical school without regard to the subjects they pursued in college, and this percentage was progressively greater in accordance with the degree of distinction attained in college. It would be interesting to have these statistics corroborated or controlled by similar ones from other institutions; but the number of cases is sufficiently large, and the figures decisive enough to show conclusively that for the study of medicine excellence in college work is more important than the subjects that have been pursued.

Now it is only for men who have done excellent work in some line in college, and who could be expected to do work of similar grade in the medical school and in the profession, that I plead. For the inferior scholars, or even the man of ordinary quality, I am not concerned. It may be unfortunate for him that he is not allowed to study medicine unless he makes up his mind to do so early in life; but it is not an injury to the profession as it is in the case of men of unusual capacity. The standard of every professional school depends quite as much on the intellectual caliber of its students as on the eminence of its professors. The intellectual power of the student body has inevitably much to do with setting the pace, with slowing down or speeding up the instruction, and no school can afford not to welcome all the men of strong mental grasp that it can get. To men of this kind the medical profession should say, "Come." It should require them to acquire, whenever possible, the preparatory training needed, but surely it should not exclude them because they do not choose their profession at an early age. Many a man of intellectual force becomes interested in some subject which he wants to continue throughout his college course, and if he determines to study medicine near the end of his college days the new rules may compel him either to drop his studies in which he has taken an interest, or to forego the possibility of entering a medical school. He is placed between these alternatives in order to comply with a formula that is no measure of his capacity and a wholly inaccurate measure of his preparation. Can we not open the road to a man of that kind, instead of shutting the door in his face because he did not take prescribed courses in the prescribed way before leaving college? In the three months of his summer vacation a man of trained mind, with habits of industry and application, can learn as much as a freshman in half a college year. Moreover, if he enters the medical school with a part, but not quite the whole, of the scientific preparation needed, he can probably make up the rest as he goes along, just as a large proportion of students always must, if they try to work at high efficiency; the important matters being on the one hand that he shall acquire the necessary preparation before he proceeds to the course for which it is required, and on the other hand that he shall not be shut out because he did not acquire it in a specified way, nor cut off for what he can do, because of disability in other subjects.

Americans are a mechanical people who trust to machinery to do their work, maintain standards and save labor. But mechanical devices as applied to human beings are apt to be defective, and in education they present, at the present day, a real danger. This runs from the top to the bottom of the educational scale. Many of our colleges refuse to appoint instructors who have not taken a doctorate of philosophy, although many of the most eminent scholars in the country have not done so, and the books a man has published are a far better criterion of his scholarly qualities than any degree granted for work done as a student. The late William James made merry over a young man who returned to Cambridge to complete his studies in philosophy, not that he came for that subject, but he was nearer to a doctorate in it than in any other, and without a doctor's degree in something he could not obtain at a certain college an instructorship in English. To such a point had pedantry been carried!

At the other end of the educational scale our school grades are so rigid that, as a rule, a bright boy or girl must go up the ladder at the pace of the average child, and therefore cannot attain to higher education until after the time when it ought properly to be reached, and may often be constrained to lose it altogether. We have at last learned to provide special schools for backward

1. Educational Review, October, 1911.

children, but the unusually quick child has no less a claim to be developed to the full extent of his or her capacity.

Our processes of education are inelastic, and if adapted to the ordinary person are hampering to the unusual mind. Is not this because we fix our attention too exclusively on the process, instead of on the result produced? We laugh immoderately when we are told that the condition for admission to the bar in England consisted formerly in eating a certain number of dinners in the Inns of Court, yet that rule was well intended. It was designed to measure a residence in the Inns of Court, which was supposed to be accompanied by diligent study of the law. Are we not going a little in the same direction? Many of us have sat in a faculty and heard a discussion whether a man, who had done all his college work well, should be refused a degree because he had not removed an entrance condition; in other words, whether he could be given the formal certificate of having done his college work when, in fact, he had completed it, but had not yet proved that he was capable of undertaking it. Are not we, with our regulations about taking so many courses which are passed and dismissed from the mind, putting our student in much the same position of the Cook's tourist who visits a European picture gallery, looks at the pictures starred in Baedeker, checks them off and straightway forgets them? Can we not make our measure of education something better than the touching of a watchman's clock?

We tend everywhere to set up a standard based on courses taken and degrees received, although such a standard measures only the minimum required. In Europe excellence in scholarship is now highly prized and opens the way to success. In England, for example, the honors a man achieved with his bachelor's degree at Oxford or Cambridge are never forgotten, and have a momentous influence on his prospects in life; but we pay little heed to such things. We ask only how many courses he has scored with the lowest passing grade; and this habit of mind is especially dangerous in the case of medicine, because to judge from the college records of men who have entered medical schools, the medical profession has not hitherto recruited as many men of high intellectual force as it ought to attract. It is, therefore, especially important for it to avoid formulas which may tend to exclude men of unusual capacity.

Let me repeat. I am not urging the admission to medical schools of men with an inadequate preparation, but I am arguing for a measure of that preparation which shall be a real test of a man's knowledge not solely of the courses he has been through, and which will not, for a failure to decide early on his career, keep out the man of power.

(*For discussion, see page* 876)

"Sure Cures" for Every Disease.—Many people delude themselves with the false hope that there is some drug to cure every disease. Specific remedies may be counted on the fingers of our hands. Very few therapeutic agents rival quinin for malaria, salvarsan for syphilis or antitoxin for diphtheria, but even these must be properly administered in order to obtain satisfactory results. The common belief that there is some drug that will cure every disease is fostered by unscrupulous persons who boldly advertise "sure cures" for rheumatism, pneumonia, cancer, tuberculosis, diabetes and Bright's disease. These fallacies quickly disappear when people become better informed as to the limitations of the pharmacopeia.—M. J. Rosenau, in *Vermont Med. Month.*

ADMINISTERING THE PRELIMINARY COLLEGE YEAR IN CHEMISTRY, BIOLOGY, PHYSICS AND MODERN LANGUAGE*

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In accepting the honor of the Council's invitation to present a paper on "The Best Method of Handling the Preliminary College Year in Chemistry, Physics, Biology and a Modern Language," I have found it necessary to modify the title. Our experience at the University of Virginia has not been such as to enable me to bring before you a plan which has been extensively tested and which may, with confidence, be recommended to others. We have, however, been in a measure pioneers in this field, we have come into intimate contact with some of the difficulties of the problem, and we have been forced to think about these difficulties and reach conclusions as to the methods of handling them.

When, in 1906, the faculty of the school which I serve decided to require thereafter a year of college work in the basic sciences preliminary to medicine, there was not a school in the entire East between Canada and Mexico, with the exception of Harvard and Johns Hopkins, which required any amount of college work for admission. The entrance requirements at large of our own university were an indefinite quantity variously estimated as from one and a half to three years of high-school work. There was no use talking of a diploma from a four-year high school, because there was virtually no such thing in the territory from which we might expect to derive students. On the other hand, conditions in the medical school were such that something had to be done, and at once. Accordingly, we announced for the next year a requirement consisting of three years of secondary-school work followed by a year of college work in the sciences. In a way, it was an absurd thing to do. We simply shut our eyes and took the plunge. We found ourselves in much the same situation as the new-born infant of a distinguished anatomist, of whom his students relate that, when the nurse inquired how he would like to have the child bathed, replied, "Just throw her in the tub, and let her work out her own technic." Precisely why we did *not* drown, I do not fully understand. The adverse conditions mentioned above were rapidly improved, however, and in 1910 we were able to introduce a requirement of fourteen units of secondary-school work, followed by a college year. During the first two or three years we were not able to reach any satisfactory conclusion as to the real value of the actual minimum requirement, because almost the only applicants who could satisfy it were college graduates, and thus the average attainments of the new men were far beyond those represented by the entrance requirement. (Let me say parenthetically that our experience leads us to dissent emphatically from many of the criticisms that have been made of the college graduate; we find him an excellent fellow to have around.) Gradually the number of new men who had entered college solely to procure the prescribed preliminary education increased, and now the bulk of the class is furnished by such men; so that we are in position to form an opinion as to

* Read at the Tenth Annual Conference of the Council on Medical Education, Chicago, Feb. 24, 1914.

the value of the requirement, to indicate some of the difficulties that we must meet in enforcing it, and to make some suggestions as to the proper way of handling them.

In considering this matter the first question to arise is, What do we seek to secure by this requirement, pedagogically speaking? We have a right to expect it to do two things: (1) equip our students with a certain amount of training in, and sympathy with, scientific work and thought; (2) supply them with a certain amount of basic knowledge needed in their study of the medical sciences. Some of us, perhaps, attach more importance to one of these items than to the other; I myself consider the former of paramount importance. Furthermore, as a by-product, this requirement should diminish materially the number of men admitted to the medical school who are unfitted in respect of ability or character for the study of modern medicine. Of course it is by no means a perfect separator — indeed, no requirement yet devised is perfect in that respect.

In order to secure these benefits, what should be the nature and content of the courses in this preliminary year? From what has been said in the preceding paragraph it may be inferred that I am not so much concerned about the content of these courses as I am about the mental training to be derived from them. Has the student gained some familiarity and sympathy with scientific thought and work? Has he learned to do some thinking on his own account? Has he learned to work out some things for himself and so to rely, in some measure, on his own exertions? Can he use his eyes, his hands, and especially his head intelligently? If the character of the courses offered is such as to lead us to give affirmative answers to these questions, I do not think that we need worry very much about their content. When all has been said along this line, however, content is undoubtedly a matter of importance, and I shall indicate as briefly as possible what our experience leads us to desire in this connection.

CONTENT OF THE COURSE

Chemistry.—This subject offers comparatively little difficulty. Assuming that the student is to give but one year to his collegiate training, the course in general or inorganic chemistry offered by most colleges of good standing is fairly satisfactory Moreover, chemistry is better standardized in the colleges than are the other scientific subjects. In our experience we may safely credit the year of chemistry completed in a college of respectable standing. We are not in sympathy with a suggestion which has been made — that both organic and inorganic chemistry should be completed in this preliminary year.

Biology.—This subject is in a very unstable condition just now in our colleges. The tendency is to abandon the old course in general biology and substitute therefor a full-year course in either zoology or botany; while under the head of general biology there may be offered a course which is really high-school physiology. Again, in one college the course in zoology may be largely comparative histology, in another comparative anatomy, etc., according to the interests of the instructors. Moreover, the time devoted to the subject varies greatly. The administration of the requirement in this subject has occasioned us considerable perplexity, and in doubtful cases we have given the student the benefit of the doubt. We think that a return to something like the old course in general biology is desirable from our point of view — a course in which the student will acquire a working knowledge of some of the principal types of living beings and a conception of the great generalizations of biology. If it could be made to include the dissection of a small mammal it would be of greater technical assistance to prospective medical students. Mammalian anatomy is doubtless good anatomy, but some zoologists seem to have a more or less contemptuous opinion of any creature higher than a starfish.

Physics.—This has been our great stumbling-block, and will continue to present great difficulties if only one year of college work is required. In our best colleges the physics course is apt to be quite a difficult one in mathematical physics, in charge of an able professor, to whom physics with the mathematics left out is like the play of Hamlet without Hamlet. The average student fresh from the preparatory school, unless he has considerable mathematical talent and the ability to think in abstract terms, when he encounters this course, is in the condition of the June-bug in the poem, which could "only buzz and bump his head agin the wall." Seventeen such students tackled our course in physics one year — three of them successfully. And yet physics is so desirable for medical students, the subject is so intrinsically interesting and offers such an admirable field for mental training, that we must do our utmost to get satisfactory courses for our students. The trouble with the average good course in physics, as we see it, is not with the laboratory work; there is usually plenty of that, though possibly it could be better correlated with the lectures. The difficulty is rather due to the abstract thought required in order to comprehend physical laws. The lectures, therefore, should be followed up by searching *oral* recitations to ascertain if the subject-matter has been understood, and the opportunities thus afforded to clarify difficult conceptions and to correct misconceptions should be fully met. The laboratory exercises should be arranged, in the main, with a view to facilitate the understanding of the subject. It seems clear that the time often devoted to the solution of problems by the aid of higher mathematics should be given to other aspects of physics; and this may also be said of much of the work in electricity, mechanics and dynamics.

Modern Languages.—In our judgment this requirement should be restricted to German or French, preferably German. The college course is based on two years of high-school work, is fairly uniform and is well conducted. It may be doubted, however, if it confers a "reading knowledge"— that will depend on our interpretation of the meaning of the term. I wonder how many of us learned to read German in college. The course might be improved for our purposes if it were made very largely a reading course, especial stress being laid on sight reading, with the last semester devoted to scientific articles. The "reading knowledge," however acquired, must be kept alive during the medical course. Here journal clubs and similar agencies can be very useful.

SOURCE OF THE PRE-MEDICAL TRAINING

Our next question is, Where shall this training and knowledge be gained? We may at once omit high schools from consideration. We shall be quite satisfied if they shall be able to prepare students for the college year, a feat which very many of them in our section of the country at least, are not yet able to perform. Fur-

thermore, I must doubt the wisdom of the Council's action in making it allowable for medical schools which lack *bona fide* connection with universities or endowment to attempt to do this work. Even if there were no other reason, how will it be possible for schools already struggling to keep their heads above the financial waters to do it satisfactorily? It seems quite clear, then, that we must lean heavily on that bruised reed, the American college. This is not the proper time, and I am not the proper person, to enter on a defense of the college; but it is perfectly permissible to doubt if all of the criticism which has been fired at that institution is deserved. At any rate many of us, I am sure, believe that it is still performing great service, and is capable of doing this one for us. Men *have* gone to college for the purpose of studying, lots of them are still doing so; and when young men realize that the college offers the only avenue of entrance to respectable medical schools, a very strong stimulus to work will become active.

One may ask, is not the Council, in recommending the completion in one year of four college subjects, three of which are laboratory sciences, expecting too much? It is a heavier work than is usually expected of college freshmen, but no greater, certainly, than is required of first-year medical students. The course outlined by the Council — six hours per week in each of the sciences and three hours per week in the language course — is not excessive; and, in any case, I am old-fashioned enough to welcome any provision to-day which leaves opportunities open to ability and character.

These considerations bring us into the midst of the practical difficulties of the problem. As the curriculums of most colleges are now arranged, it is practically impossible for students to get this required work in one year in such colleges. Will the colleges be able, or if able, willing, to recast their curriculums, or to modify their courses, or to offer special courses in the required subjects for the benefit of the premedical students? We may feel certain, I think, that some of them will not, and that probably others cannot, do any of these things. Some of our colleges are ultra-conservative, and so will make no concession to what they will regard as a vicious movement in education. Others who might be willing enough to assist us will be hindered by the exigencies of their circumstances, for example, small size of teaching staff, which will prevent the offering of additional courses or the serious modification of the particular courses for which there is the greatest demand. Under the conditions which exist at present in most colleges the enforcement of the requirements will mean two years of college work. In the South, for example, the requirement in modern language alone will have this result, as so many of the high schools do not offer the preparatory work necessary as preliminary to the college course. I am tempted to think that in the case of the Southern schools it would have been better, if possible, to allow English in the place of French or German for the present. Again, in the case of a considerable number of universities which have medical departments, the case has been settled, so far as those universities are concerned, by the flat requirement of two years of college work. Making allowance, however, for all of these considerations, it would seem that there would still be a large number of colleges which could and would offer the course of one year as outlined by the Council. Perhaps, too, the time is propitious; for many colleges have realized that in the too exclusive pursuit of a somewhat indefinite ideal of culture there is danger of losing touch with the living, striving world about them. We may expect that a large number of colleges would be willing to meet at least half way a movement which promises to increase their opportunity for service to their communities. In this connection I venture to suggest to the Council that the medical schools unassisted cannot be expected to work out this problem to a successful conclusion; but, it seems to me, the Council must assume the leadership and undertake an active campaign, in order that its views may be widely adopted and be put into operation by a large number of colleges.

This subject is so large that it would not be possible, without making this paper entirely too long, to discuss every point which suggests itself. There are, however, a few practical questions on which I should like to touch. Should any conditions be allowed? In our experience it is advisable to allow one condition—chemistry excepted—provided the condition is of such a nature that it can be removed before entering the second year of the medical course; nor, as a general rule, should a student be engaged in removing a condition at the same time that he is taking the full first-year medical course.

Again, shall students be admitted on certificate alone, or in the absence of satisfactory certificates, may they be admitted by passing entrance examinations? At first blush it would seem that, if an applicant is willing to demonstrate his qualifications by an examination, he should be allowed to do so; but a little reflection shows that the case is not so simple. While we might be able to determine the applicant's fitness so far as his "book learning" is concerned, it would be extremely difficult to carry out examinations which would give satisfactory data as to laboratory experience and mental training — not to mention the difficulties which would arise from the practice of admitting to such examinations students who had failed on college courses in such subjects. Accordingly, we admit only by certification in case of the scientific subjects. In modern languages the case is different, for here it is comparatively easy to determine an applicant's ability to read the language.

The certificates required should be filled out by the proper officer of the college from which the applicant comes, and should state clearly the subjects passed and the hours of class-work, lecture and laboratory, embraced in each course and the length of time in weeks devoted to each subject. It should also contain a transcript of the high-school credentials on which the applicant was admitted to the college in question. It would seem necessary to require this transcript in order to protect the high schools against a possible lowering of the bars in the case of premedical students.

Finally, who should pass on college certificates? With us this task is entrusted to the dean of the medical department, while the dean of the university passes on the high-school portion of the requirement. I regret very much that I have not had time to learn what has become, if there be any prevailing practice, the prevailing practice of our universities in this respect. In the case of the university medical departments, however, it seems to me to be immaterial whether the requirement is administered by the dean of the medical school, the dean of the university, or a committee of the medical faculty. The dean of the university is usually in possession of pretty accurate information about the col-

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leges, gained, in large part, by actual experience with students from these colleges, and can give the proper advice in doubtful cases. We have had but little trouble on this score. I myself am inclined to think that the certificates should be passed on by the dean of the university, provided that often overburdened official will take the additional work. In the case of the detached medical schools, however, it is not so easy to answer the question. It is very doubtful if the officials of the public-school systems, to whom this work is now entrusted in many cases, have, in general, sufficient knowledge of the colleges of the country to qualify them for this work. Nor does it appear that the deans of such schools could perform the duty in a satisfactory way, since that knowledge of the work of the colleges derived from years of experience which is found at the universities does not exist there. If, however, there existed some body of definite information concerning the colleges, if certificates giving the detailed information mentioned above be required, and if these certificates were regularly checked by some competent authority, the problem would not be so difficult; and this leads me to make a second suggestion. It seems to me that this Council must add another to its list of achievements. There are many colleges in this country, good, bad and indifferent, about which reliable information accessible to all is very meager. Cannot the Council undertake an investigation of the colleges, as a result of which it could furnish to the medical schools definite information as to which institutions may, and which may not, be safely accredited? This would probably not prove such a formidable task as it may, at first sight, appear. Many of the colleges are well known and require no investigation, reliable judgments of others can be obtained from the deans of the leading universities, and perhaps only a comparatively small number would require personal inspection. Cooperation in this work might be secured with the Association of American Universities, which is now undertaking a classification of American colleges. The results of such an investigation would facilitate immensely the work of administering the requirements we are now discussing, and, incidentally, would be of much benefit to the colleges themselves.

(For discussion, see page 877)

HOSPITALS AND THEIR RELATION TO MEDICAL COLLEGES AND THE TRAINING OF INTERNS*

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Dean of Ohio-Miami Medical College of the University of Cincinnati
CINCINNATI

I realize that it is not alone the buildings of the new hospital and their arrangement which aroused interest and prompted the invitation to me to present to you the illustrations of it, but also the fact that we of Cincinnati have the unique distinction of being the first in this country to possess a strictly municipal university with the medical college an integral part thereof, and a large municipal general hospital, which is the clinical and pathologic school of the medical department — an organization resembling those found in Germany, which I believe we all agree is the best, and which, let us hope is the type that will, in the future, largely be accepted as the standard in this country.

I disclaim any desire to detract in the slightest from the praise due privately endowed or sectarian hospitals, for the splendid service they have rendered and are rendering, and grant that many of them through their fine buildings and superior equipment and excellent teaching facilities were the means of causing (by their example) great improvement in the upkeep and management of municipal institutions; yet, with few exceptions, they are not the type that furnishes the best means for teaching and developing medicine, because in most of them the number of free or charity beds is comparatively limited, and the private or pay patients are usually not at the disposal of the staff for teaching purposes to classes of medical students. Being private institutions, they can elect just what kind of diseases they will or will not admit — infectious and contagious diseases are always excluded. Many of the hospitals

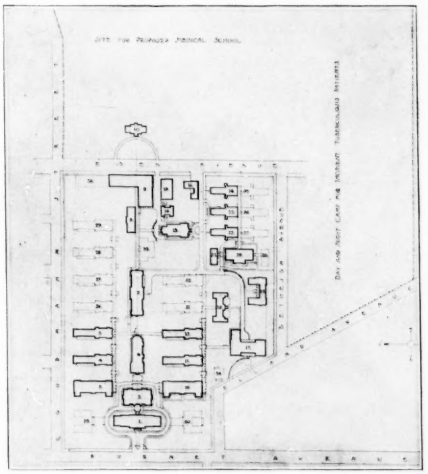

Fig. 1.—Block plan of New General Hospital, Cincinnati; building schedule: 1, administration building; 2, receiving ward; 3, Ward A; 4, Ward B; 5, Ward C; 6, operating-pavilion; 7, kitchen and dining-hall; 8, male dormitory and linen-room; 9, power and laundry-building; 10, Ward H; 11, Ward J; 12, Ward K; 13, pathologic institute and chapel; 14, detention ward; 15, disinfecting station; 16, garage and stable; 17, nurses' home; 18, Ward N; 19, female dormitory; 20, administration building of contagious group; 21, isolation ward; 22, Ward O; 23, Ward P; 24, Ward Q; 25, pay ward; 26, Ward D; 27, Ward E; 28, Ward F; 29, Ward G; 30, clinic; 31, Ward L; 32, Ward M; 33, gymnasium and bathhouse; 34, superintendent's residence; 35, private ward; 36, coal yard; 37, Ward R; 38, Ward S; 39, Ward T; 40, special contagious ward.

specialize, thus greatly restricting their usefulness to the student. To see all kinds of cases he must visit other hospitals, often far apart. We have continued to crowd more subjects into the student's curriculum until every moment is valuable. Therefore, if the student's work can be concentrated, it will mean conservation of his time and strength and greater efficiency. Nowhere can he obtain that so well as in a large general hospital where all diseases and conditions can be found and freely studied.

In order that all our municipal hospitals shall render the best service, they must not alone care for the sick

* Read at the Tenth Annual Conference of the Council on Medical Education, Chicago, Feb. 24, 1914.

entrusted to them, but also aid in every possible way to broaden our knowledge of how to combat and prevent disease, and that can be accomplished only by making them *teaching hospitals*.

In Cincinnati the staff positions in the City Hospital are almost exclusively filled by members of the faculty of the medical department of the university. The appointments to the staff have since two years been made by the mayor or his service director on nominations by the staff, but he has the power to disregard their wishes.

A charter commission, elected last year, is now preparing a new charter for Cincinnati, which is to be submitted to the vote of the people this year, and, we hope, will be adopted. This commission is fortunately composed of broad-minded men who are fully alive to the best interests of the medical college and the New Hospital, and it may interest you to know how they propose to safeguard both.

The following is copied from the proposed new charter:

First: A Department of Hospitals: This department shall be managed by a board of hospital commissioners of seven members, consisting of the following:

1. The health officer.
2. The director of the Department of Social Welfare.
3. The dean of the medical department of the University of Cincinnati.
4. One person, confirmed by the mayor after selection by the board of trustees of the University of Cincinnati.
5. Three citizens to be selected by the mayor.

Each of the last four named shall serve for a term of six years. In making the first appointments the mayor shall confirm the selection of the university trustees for a term of six years, and shall appoint one citizen for two years, one for four years, and one for six years, and thereafter each of their successors shall be appointed for a term of six years. This board shall have power to appoint such superintendents as may be necessary and shall have control of the finances and business administration of all hospitals.

To best serve the citizens of Cincinnati the three objects of the hospitals should ever be kept in mind. The functions of the city hospitals are:

A. To care for the sick and injured brought to the city hospitals.

B. To assist in constructive preventive work along the lines of public health and public welfare.

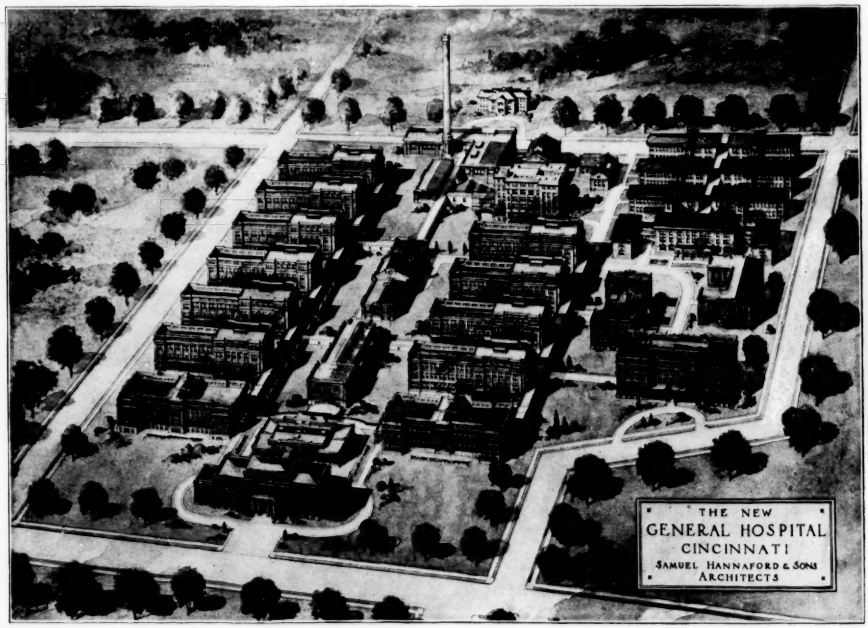

Fig. 2.—Bird's-eye view of the New General Hospital, Cincinnati.

C. To provide for medical instruction and research.

In order that the new hospital may serve the people of Cincinnati to the fullest extent it must be a teaching hospital, but such teaching facilities shall be open to the students of any medical college in Cincinnati which is recognized by the State Medical Board, and all city hospitals must be closely allied with the medical department of the University of Cincinnati. The university and the hospital are dependent each on the other, and unless the two go forward together neither will measure up to the greatest possible efficiency.

Second: The medical staff of the hospitals shall be appointed by the board of hospital commissioners on the recommendation or nomination of the board of directors of the University of Cincinnati so that the appointments will conform in a large measure to the method of the appointments of professors and instructors in the other departments of the university.

Third: The medical staff of the hospital shall have the privileges of teaching and research in the city hospitals. The board of trustees of the university shall determine the manner in which the medical departments of the hospitals shall be organized and conducted to obtain the most efficient service, the regulations under which teaching shall be done, and at what stage in their medical course the students shall be admitted to the teaching advantages of the city hospitals.

From this you will see that the medical department of the hospital is placed completely under the jurisdiction of the university, which is, as it should be, while

Fig. 3.—Administration building of the New General Hospital, Cincinnati.

the business administration of the hospitals is vested in a board of directors, the composition of which is, I believe, a most effective one.

The board of health in Cincinnati is non-political. This board appoints the health officer (a physician) selected for his ability regardless of his political tenets, and is not subject to the vicissitudes of political changes. Hence we felt that he would be a valuable member on the board.

As a rule, the municipal hospitals in this country have so far devoted themselves only to the care and cure of the sick, but have neglected the social service side, which will look after the families of the patients while the latter are in the hospital, keeping in touch with, following and aiding the convalescent patients after they leave the hospital until they again become breadwinners. It is true that in some instances private social-service organizations have rendered commendable service, but as a rule because of lack of funds and full-time workers they cannot equal in efficiency a well-

Fig. 4.—Ward buildings of the New General Hospital, Cincinnati

organized and powerful municipal social-service organization. For that reason it was thought well to put the social-service director on the board. The dean of the medical faculty is made a member because, by virtue of his office, he should be in position to give valuable council to the board on medical questions. The other four members will probably be laymen, selected because of their business ability and influence for good in city affairs.

The hospital superintendents and all employees must pass a civil service examination, which is open to any one whether he resides in or outside of Cincinnati.

We believe that, conducted under such conditions as outlined above, the municipal hospitals in this country will rise to the exalted position which they occupy in Germany, the pride of every city in which they are located, and one of the most potent factors responsible for the supremacy of Germany to-day in the world of medicine.

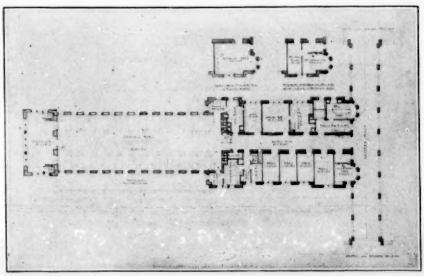

Fig. 5.—First-floor plan, typical ward building, New General Hospital, Cincinnati.

Cincinnati is fortunate in having a mayor who is in full sympathy with this movement. At a dinner given recently in honor of Professor Welch of Johns Hopkins, Mayor Frederick S. Spiegel said in concluding his address of welcome:

In conclusion I desire to say that I am in full agreement with the efforts of our city to establish not merely a hospital but a clinical hospital. To many of our fellow citizens this term may be a strange one, but if they had studied in Vienna or in the cities of Germany, they would know that there the hospital is always a corporate part of the medical school.

Fig. 6.—Pathologic institute.

Let us hope that the chief executives and those having charge of hospitals in every other large city in this country may be imbued with the same progressive ideas.

Granting then that the large municipal hospitals are the best suited for medical teaching, it becomes our duty to endeavor to raise their medical standard, their organization and administration to the very highest point of

efficiency. I am strongly in favor of municipal hospitals, because there is no valid reason why the support of the sick poor should fall on the shoulders of the comparatively small number of charitable citizens, which is the case when hospitals are supported by voluntary contributions. *The municipal hospitals should be made equal to the best, and their maintenance being paid out*

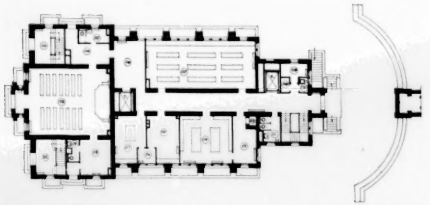

Fig. 7.—First-floor plan, pathologic building, New General Hospital, Cincinnati; schedule of rooms: 101, stair hall; 102, chapel; 103, stair hall; 104, lobby; 105, minister's robing-room; 106, undertaker's room; 107, laboratory; 108, closet; 110, slop-sink; 111, water-closet; 112, vault; 113, custodian's office; 114, reading-room; 115, chemical laboratory; 116, spectroscope; 118; family retiring-room; 119, water-closet.

of the general taxes will compel that large percentage of the population who are abundantly able to contribute, but never do, to bear their just part of the burden.

I know that the argument will be advanced that politics in city affairs will prevent the carrying out of the high ideals mentioned above. To my mind that depends on the leaders of the profession themselves. If in every city a few of them will stand together and give freely of their time and energy to educate the people as to what is right, and to the best interests of the sick and the city in general, I doubt if there is any community in which the majority of the people will not rally to

Fig. 8.—Third-floor plan, pathologic building; schedule of rooms; 301, amphitheater; 302, 303, 304, 309, 310, 311, 312, laboratories; 305, closet; 307, slop-sink; 308, water-closet.

their support and help to bring about the desired results. True, it takes time and perseverance, but I am firmly convinced that the old adage that "truth is mighty and will prevail" will also be proved correct under these conditions.

With the raising of the standard of medical teaching and the hospitals becoming the clinical departments of universities, there must also come, in the interest of hospital efficiency and teaching, the abolition of the rotating service of the chiefs of departments. That this will encounter some opposition there can be no doubt, but it is bound to come, and judging by the number of institutions in which this change has been effected, its adoption in the near future by the leading municipal hospitals appears reasonably certain.

The paying of salaries to the heads of the departments of surgery, medicine, obstetrics and gynecology appears to be the best solution. I realize that at present few, if any, public institutions can adopt this standard; but so long as the fundamental branches are taught by first-class full-time men, the clinical side will, till the higher ideal can be accomplished, maintain its standard for efficiency under the guidance of carefully selected practicing physicians who serve without compensation.

In considering how best to regulate the services with payment of salaries to some or all of the heads of departments, we take cognizance of three methods:

1. The heads of all clinical departments shall be paid a salary for devoting a specified amount of time each day to the hospital, but are permitted to carry on their private practice, as is generally done in Germany, certainly with most satisfactory results.

2. The heads of the departments of medicine, surgery, gynecology and obstetrics shall be paid a salary, but are enjoined from carrying on private practice, excepting consultations — the latter not limited to the hospital in which the heads of above-named departments are serving — and for which the physicians retain the fees.

3. The heads of the departments of medicine, surgery, gynecology and obstetrics shall be paid a salary

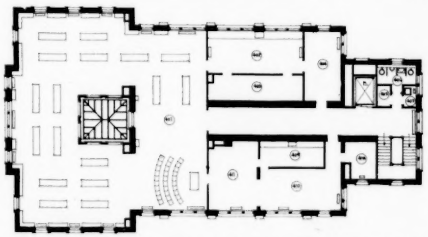

Fig. 9.—Fourth-floor plan, pathologic building; schedule of rooms: 401, museum; 402, curator's work-room; 403, store-room; 404, curator's office; 405, closet; 406, water-closet; 407, slop-sink; 408, negative store-room; 409, dark room; 410, photographic laboratory; 411, photomicrography.

and their consultations limited to cases brought to their own hospital, with the fees for such consultations going to the hospital fund, instead of to the physician.

My personal views are unhesitatingly in favor of the first proposition.

The wonderful work so successfully performed of investigating, classifying and standardizing the medical schools of this country, as carried out by the Council on

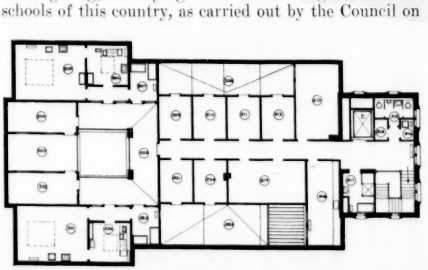

Fig. 10.—Fifth-floor plan, pathologic building; schedule of rooms: 501, surgical operating-room; 502, 504, 509, 510, 511, 512, 520, 521, animal pens; 503, 508, 522, open yards for animals; 505, pathologic-bacteriologic operating-room; 506, preparation room; 507, 517, 523, bath-rooms; 513, fan room; 514, closet; 515, water-closet; 516, slop-sink; 518, feed room; 519, store-room; 524, sterilizing-room; 525, open court.

Medical Education and the Carnegie Foundation, as set forth in Abraham Flexner's classic reports, is rapidly eliminating the undesirable, low-standard medical

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schools. May the work of standardizing the hospitals, which is now under way, be equally successful at an early date. It is perfectly evident that the action already taken by the states of Minnesota, Pennsylvania and others, and the feeling both among leading physicians and among laymen, that every man who is going to practice medicine should have at least one year's service in a hospital, will soon be adopted in many other states. As Dr. Herrick has so aptly said:

> If he (the student) does not get his training in this safeguarded manner before he is a licensed practitioner, he is forced to get it in his private practice on your child or on mine with no counseling voice of senior to keep him from sins of omission and commission. How many sad, even fatal blunders, are made through lack of proper practical training no one can tell—it is best not to tell!

I am strongly in favor of the hospital year, and believe that the time has arrived for united action on our part, directed toward having laws passed requiring the hospital year before a license is granted to practice medicine.

If the hospital work is compulsory, then the student has a right to know that the institution he enters is up to the standard requirements. The serving for pay during the hospital year should be prohibited; only poorly conducted institutions will pay, and the small temporary reward can in no way compensate for the loss to the intern of efficient hospital service.

Fig. 11.—Contagious group.

As it was realized several years ago that the hospital year was bound to come, the accommodations for interns in the Cincinnati New General Hospital were planned spacious enough to meet all requirements. According to the comprehensive report of the Council on Medical Education to the House of Delegates, June 16, 1913, on "The Hospital Intern Year," there are in this country about 4,500 medical graduates each year.

There are 924 hospitals having 100 or more beds, and 1,500 having from twenty-five to 100 beds, a total of 2,424 hospitals.

Of these, 852 hospitals have 3,000 interns, while 1,572 hospitals have no interns, and as there are only 1,500 medical graduates left for whom to provide internships, or less than one intern to every hospital not supplied, there seems no valid reason why there should be any difficulty in providing every candidate with a hospital internship.

Many colleges report that some of their graduates do not desire internships, either because they are going directly into practice or "they were married." One reason for this is no doubt to be found in the fact that, owing to faulty planning, or no planning at all, of the premedical education, the average age of the students graduating in medicine in this country, including a hospital year, is about 28 years, while in England and Germany it is about 25 years.

It therefore seems plain, as so forcibly set forth by Dr. Bevan and others, that the premedical education should be so planned as to graduate our students at the age of 25 instead of 28. This would save three years at that period of life when the fire and ambition of youth with the power of assimilation and adaptability are at their best and count for so much when the graduate is beginning the struggle for an honorable position in his chosen vocation.

(*For discussion, see page* 877)

REGISTRATION UNDER THE CANADA MEDICAL ACT*

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Registrar of the Medical Council of Canada
OTTAWA, ONT.

Allow me in the first place to express my appreciation of the compliment extended to me in giving me this opportunity of addressing this distinguished gathering of educationalists. I fully realize that it is the office I hold that has singled me out for this distinction, but nevertheless, I feel that you will pardon an humble pride when I tell you that this scheme of "Dominion Registration" has for many years been very dear to my heart and that in season and out of season I have forwarded the measure to the limit of my capacity, and now when I find that within eighteen months of its fruition I am here in the flesh to amplify its measures to my colleagues of this great republic, I feel a sense of gratification not measurable in words.

Since the birth of the Dominion of Canada in 1867 the profession of medicine has never once lost sight of the unfortunate position it was placed in by reason of certain clauses of the British North America act, which placed matters affecting education under the control of the provinces. It is fairly clear that such was not the absolute intention of the framers of that act; but rather that what was intended to be included was matters of ordinary or common public education, and from that day to this the provinces have held out stoutly for what they honestly believed were their rights under the constitution.

With the birth of the Dominion came the birth of the Canada Medical Association, and at its first session in Quebec in 1867 under the presidency of Dr. Tupper, now the veteran Sir Charles Tupper, the question was introduced and discussed and a bill was actually framed about two years later to test the question in the Canadian parliament. So many obstacles appeared to be in the way that the scheme was dropped so far as the active political leaders were concerned. When I mention that Sir Charles Tupper, a prominent member of our profession in his day and a prominent and leading politician as well, felt that the scheme for a federal act was out of the question, you will realize that serious difficulties must have been on the horizon. Sir Charles was not a man to be daunted by trifles and he was always the embodiment of loyalty to our profession.

I may add that years afterward (in the early eighties) I personally went into the matter with him, only to be told that the one and only way to accomplish our desires was by first securing an amendment to the

* Read at the Tenth Annual Conference of the Council on Medical Education, Chicago, Feb. 24, 1914.

British North America act in the imperial parliament at Westminster — many of my hearers must know what a herculean proposition this would entail.

Our profession, always hopeful and never pessimistic, kept on bringing the question to the notice of the general body of practitioners as represented by the Canada Medical Association. From the time I joined the association in 1879 the point has never once been lost sight of, and it came about that the great mass of practitioners, constantly increasing in numbers and influence, became gradually permeated with a desire for some general scheme that might be called an interprovincial reciprocity, or roughly, a breaking down of imaginary barriers so far as active practice was concerned. Committees were formed and discussions took place annually, but all to no purpose. It would appear that we were seeking the solution of an impossible situation.

The growth of the Dominion, the addition of new provinces, the establishment of new borders, all tended to tighten the rein, and the barriers became strengthened rather than weakened.

Equalization of standards and the creation of examining boards with corresponding similarity of ideals must be the preceding elements to interprovincial reciprocity. Then again, certain universities had acquired charter rights from the crown extending to all faculties, and this became a bar not easy to surmount in some quarters.

I must now digress for a moment to say that at a most opportune and auspicious moment a patriot and a prophet arose in our country, and to him was given a roving commission by the Canada Medical Association to inaugurate a scheme for the establishment of a medical council for Canada. I refer, of course, to Dr. T. G. Roddick of Montreal, late dean of the faculty of medicine of McGill. To say that Dr. Roddick threw his whole soul into this work would but feebly express my thoughts and his untiring services. He threw his time and his money as well as his energy into it and in 1896 actually sought and obtained a seat in parliament in order to be in a still stronger position to forward his measure. Could human devotion and enterprise go further than this? It necessitated hard work, much patience and diligence as well as a refined diplomacy of a high order. Unbounded pluck and perseverance came to his assistance. He traveled the length and breadth of Canada on three separate occasions, met all the provincial councils, sympathized with them, argued with them, persuaded them to rise above provincialism, and while all this was going on he never lost an opportunity of bringing his scheme to the notice of the profession at large. It is gratifying to us all to know that his work has been appreciated and that on its consummation in November, 1912, he was unanimously elected the first president of the Medical Council of Canada by acclamation.

I most sincerely wish that he could have been here to-day to enter into the spirit of this meeting and to take my place on this platform by addressing you, but it was not possible. He begs me, however, to assure you that he is thinking of this meeting to-day and that while he can only send his benediction, his hopes and wishes are for the highest fruition of your endeavors and that they will be crowned with a result that will stand for what is highest and best.

The history of the creation of a Canada medical act can be told now without trespassing too long on your patience. I may say that the pivotal points of the act were few. Certain great principles had to be kept in mind, and possibly if I take these up seriatim I can the better elucidate what has happened.

I have told you that the provinces of our dominion had certain charter rights specifically granted to them, and it was provided that as new provinces were carved out and given a constitution by the Dominion government at Ottawa these charter rights were to be automatically extended. One of these was education, and so it came about that each province has from time to time passed certain laws regarding the admission of men to the license to practice medicine. Certain bodies outside what we know as the regular profession also secured rights for their adherents.

It is evident now that the parliament of Canada could not pass laws that would contravene the provincial rights, and I may say that on many occasions the framers of the Canada medical act were confronted with this awful bugbear. It was thought by some that beneath the wording of the act there must be some sinister influence lurking that would in some way undermine their privileges. It was not really so, because the Canada medical act to-day does not take away a single right of the provinces, albeit some years were spent in establishing the argument.

The first point then is that the federal act constitutes a body known as the Medical Council of Canada, giving it powers to create an examining board and to establish a medical register for Canada. The next point was that the standard to be fixed by the council, the passing of which would entitle the candidate to be enrolled on the register, was at all times to be at least as high as that obtaining in any province of the Dominion. If the council allows the standard to fall below a certain plane and exception is thus taken to the act by an aggrieved province, there is provision in the act for a tribunal before which the matter is to be heard and settled.

The next point was the composition of the council. This really gave rise to much controversy owing to the unequal distribution of medical men in the various provinces and to the fact that if so-called justice was to be done as regards representation by population, the council would be an unwieldy, cumbersome body with its efficiency proportionately reduced. It was kept in mind that in this great country where I am speaking to-night the small state of Rhode Island has representation in the Senate equal to her sister states. I submit this subject to correction.

To leave out pages of discussion and argument, a basis was finally arrived at as follows: Each province of the Dominion through its medical council is entitled to send two representatives to the council, and they are to be chosen or elected in such manner as the particular provincial medical council may by by-law enact.

Then, each university having a teaching faculty of medicine, or medical school having university affiliations for granting degrees in medicine is entitled to one representative.

The homeopathic body, which has certain rights in all the provinces, is considered as a whole, and they elect three representatives from their adherents in Canada.

In order to cement this body and give the government of Canada a voice in the conduct of its affairs and to make it more or less an advisory body if need be, to the Canadian government, the Governor General in

Council (which is the Dominion cabinet) has the right to send three representatives. On this point it is provided further that as certain of our western provinces have not as yet university representation, and until they do have it by virtue of the creation of faculties having degree-conferring powers in medicine and surgery, two of the three government appointees must be selected from one or other of the said western provinces to distribute as equably as may be the total body of the council over the entire Dominion.

Another point was that the Medical Council of Canada was to have nothing to do with matriculation or preliminary education. The framers of the act immediately conceded that this was eminently fair and in the spirit of the British North America act.

Another important point which followed naturally from the foregoing is that holders of foreign diplomas must present similar certificates to those required of Canadian graduates.

This was necessary in order that the provincial authorities who must sign the certificates of those applying to come up for the Medical Council examinations, and who are not as yet licensed practitioners of any province of Canada, can satisfy themselves on all points as to whether the candidate has fulfilled all the requirements, including preliminary education and matriculation and the course of study subsequently.

A difficult question arose in considering the status of those who were already licensed in some province when the act came into force. It was felt by certain provinces that it would possibly be to their detriment if the whole body could receive Dominion registration by paying the fee when the act came into force and so receive registration in any province if they so desired. It was decided that a fixed time should be settled for a man to have been licensed before he could thus take advantage of the act. It was pointed out that if a man had been six or seven years practicing in a given locality, he would be more likely to have formed alliances and be more or less rooted in his habitat and that growing provinces would therefore not be liable to a stampede. After prolonged discussion and negotiation this period was fixed at ten years. Therefore, when the act came into force those who had been licensed prior to the particular date and had been ten years so licensed could apply for and obtain Dominion registration by paying the fee and complying with certain ordinary regulations. This so-called ten-year clause goes on for a time and applies to all who were licensed to practice prior to Nov. 7, 1912. Thus, if a man was licensed in 1904 he can obtain Dominion registration under the clause when ten years have expired from the date of his registration, namely, 1914, and so on.

The result of this will be that the ten-year clause will be taken advantage of more largely in the first few years of its operation than later, and after ten years have elapsed there will be only a few men seeking registration by this means, because the natural law is always operating and cannot be legislated away, namely, that we are growing older.

I now come to my final paragraph and about this there was much discussion and argument: At what date was the act to come into force? Leaving aside much detail of interesting argument, it was finally settled in the act that it was not to become operative, but was more in the shape of a permissive bill, till all the provincial legislatures had legislated in effect that they agreed to its provisions and had so amended the medical act of the province that it provided that if A. B. presented himself to the registrar of the province holding a certificate that he is enrolled on the medical register of Canada, he is entitled to be registered on the register of the province as a licensed practitioner by complying with the ordinary regulations in that behalf, such as paying the customary required fee, etc.

ADENOMYOMA OF THE RECTOVAGINAL SEPTUM *

THOMAS S. CULLEN, M.D.
BALTIMORE

At the meeting of the Canadian Medical Association in June, 1913, I incidentally referred to two cases of this character that had recently come under my care.[1]

This group of cases has in large measure escaped the attention of the surgeon. They are, however, of much interest not only to the pathologist but also to the operator.

Several months ago Dr. D. S. D. Jessup of New York, sent me slides from two pelvic tumors. In each case the tumor had been attached to the cervix posteriorly and had grown into the rectal wall. In each case the growth was so firmly fixed that, while the surgeon was doing a complete abdominal hysterectomy, he was compelled to remove at the same time a piece of the anterior rectal wall, as it was absolutely impossible to separate the uterus from the rectum. The slides that I examined showed non-striped muscle with islands of typical uterine mucosa scattered throughout them. The muscular tissue under the microscope was seen to be intimately blended with the rectal wall, but the rectal mucosa was perfectly normal. The histologic pictures in these two cases were identical with those found in adenomyoma of the uterus.[2] An account of the two cases from which the specimens were taken will be published shortly by the surgeon who operated on the patients.

Within forty-eight hours after I sent my report to Dr. Jessup, the February number of the *Proceedings* of the Royal Society reached me, and in it was a similar case reported in full by Cuthbert Lockyer of London. His description was most lucid and the illustrations left absolutely no doubt that the case was one of adenomyoma of the rectovaginal septum.

LOCKYER'S CASES

CASE 1.—*Teat-like projection in the vaginal fornix.*

Cuthbert Lockyer[3] at the meeting of the obstetric and gynecologic section of the Royal Society of Medicine, Jan. 2, 1913, before reporting a very interesting case of adenomyoma in the recto-uterin and rectovaginal septum, briefly referred to a case that he had previously seen in which there was a teat-like projection in the right vaginal fornix. This projection was covered over with vaginal mucosa. There was no ulceration and the growth lay close to the cervix on the right side and was long enough to be palpable before the examining finger reached the vaginal cervix. In this case there was no projection into the rectum and no operation had been performed.

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* From the Gynecological and Pathological departments of the Johns Hopkins Hospital and University.

* Read before the Southern Surgical and Gynecological Society, Atlanta, Ga., Dec. 16, 1913.

1. Cullen, Thomas S.: Address in Gynecology, Canadian Med. Assn. Jour., August, 1913.

2. Cullen, Thomas S.: Adenomyoma of the Uterus, Philadelphia, W. B. Saunders Company, 1908.

3. Lockyer, Cuthbert: Proc. Roy. Soc. Med., 1913, vi, No. 4.

CASE 2.—*Adenomyoma of the recto-uterine and rectovaginal septa.*

The patient, aged 35, was married but sterile. She complained of vaginal hemorrhage and pain. The periods had always been regular, but for twelve months the loss had been excessive, particularly for the last three months. There was great pain in the rectum, and defecation had become very difficult. The pain had been very severe for the past three months and the patient felt as if "something prevented the bowels from moving." The pain was always worse at night. For several weeks the patient had been bedridden. The hemorrhage for a few weeks previous to her entering the hospital had been practically continuous, but there had never been any bleeding from the bowel.

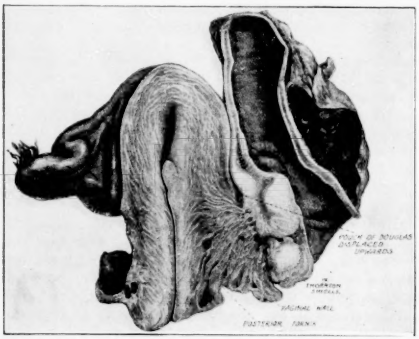

Fig. 1.—Adenomyoma of the rectovaginal septum. A longitudinal section of the uterus and rectum. The posterior wall of the cervix is occupied by a diffuse fibroid growth, which near the cervical canal contains irregular cavities. Posteriorly the growth is intimately blended with a tumor which has implicated the anterior rectal wall and markedly encroached on the lumen of the bowel. The rectal mucosa is still intact. For the histologic picture see Figure 2. (Copied from Cuthbert Lockyer.)

On vaginal examination a curious hard mass was felt in the posterior vaginal fornix; it was definitely fixed to the supravaginal cervix and adherent to the pelvic floor. The mass was found to project anteriorly into the lumen of the rectum, but the overlying mucous membrane was intact. No definite diagnosis was made.

It was noted that, although the vaginal cervix was normal, the upper part of the posterior vaginal wall for a space of 1½ square inches was puckered and presented bluish-like varicosities.

Operation.—When the abdomen was opened the appendages were found to be normal and the uterus small. The rectum and uterus had become fused together below the peritoneal reflection so that the two structures could only be moved *en masse* from side to side (Fig. 1). As it was impossible to remove either viscus apart from the other Lockyer proceeded to take the uterus and rectum out together. For this purpose he began as for a Wertheim panhysterectomy by dissecting out the ureters. The left ureter was very intimately adherent to the side of the rectum, to the growth and to the vagina. The right ureter was not adherent. After displacing the ureters and ligating the uterine vessels he carried the dissection anteriorly down as far as possible. The vagina was opened in front and the uterus was now freed from all its connections except where it was adherent to the rectum and to the undivided posterior vaginal wall. The rectum was next divided between clamps and the proximal end wrapped up and held aside in the upper angle of the wound. The edges of the vagina were ligated with several interrupted sutures. The edges of the rectum were invaginated and then oversewn. The cellular tissues were tied off and the peritoneum of the pelvis was closed. A small vaginal drain was employed.

The sigmoid or upper free end of the bowel was brought out through a fresh lateral opening in the left iliac region and the central abdominal wound closed. Two drainage-tubes, however, were inserted down to the closed peritoneal level. The convalescence was disturbed, but the abdominal wound never broke down and the patient at the time of the meeting was sitting up, although still in the hospital.

Lockyer says that microscopically the growth had the structure of an adenomyoma, being made up of dense fibrous and muscular tissue in which were sparsely scattered simple gland tubules surrounded by very cellular tissue similar to that seen around the tubules or follicles of adenomyoma of the uterus (Fig. 2). Histologically, he says, the growth was comparatively benign, but with the naked eye it could be seen that the cervix as well as the anterior wall of the vagina had been definitely invaded by it. There were large hemorrhagic areas which ran down from the center of the growth to the vaginal mucous membrane. The clinical observation that the mucosa of the bowel was intact proved to be correct, the only surface lesion being the puckering of the posterior vaginal wall.

Lockyer suggested that this tissue had developed from remains of the wolffian duct. In discussing the case he said that had he known that the growth was not malignant he would have considered removing a portion of the rectum and closing in the opening, thus avoiding the necessity of making a permanent colostomy; but he drew attention to the fact that the rectal wall over a large area was firmly fixed and that in all probability it would have been necessary in this case to do a resection.

Two excellent illustrations accompany the communication. The first (Fig 1) shows a longitudinal section of the uterus and the rectum with the growth lying between. The posterior wall of the uterus near the cervix is much thickened and intimately blended with the growth. The rectal mucosa, although puckered, is everywhere intact.

Figure 2 shows a section through the growth and rectal mucosa. The rectal mucous membrane is intact. The underlying growth is in large measure muscular in character. The gland spaces are large and small. Some of the glands lie in direct contact with the muscle, others are separated from it by a definite stroma.

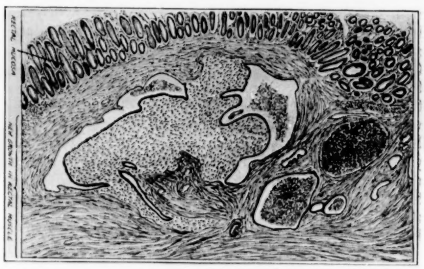

Fig. 2.—Adenomyoma of the rectovaginal septum. For the gross appearance of the tumor see Figure 1. The section includes the rectal mucosa and a portion of the underlying tumor. The rectal mucosa is intact and normal. The tumor lying beneath it consists of non-striated muscle with glands scattered throughout it. Some of these glands lie in direct contact with the muscle and a few of them are dilated. The glandular area in the center of the field has a definite stroma, which is sharply differentiated from the surrounding muscle. It is the characteristic stroma of the uterine mucosa. The tumor is so intimately blended with the rectal wall that no point of cleavage is possible. Consequently the operator would be forced to remove a portion of the rectum, if he attempted a complete excision of the tumor. (Copied from Cuthbert Lockyer.)

There is absolutely no doubt that Lockyer was dealing with a typical adenomyoma. Its constituent elements were similar to those of adenomyoma of the uterus.

In the discussion of Dr. Lockyer's paper Dr. Macnaughton-Jones briefly referred to a patient aged 66, a nullipara, who had a hard mass occupying the rectovag-

inal septum. This included the posterior aspect of the vagina with its upper two-thirds and had encroached laterally for some distance. No microscopic examination of this growth had been made, and consequently its exact character could not be determined, although the patient six months after a curettage was in good health and not suffering to any appreciable extent.

Mr. Clifford White in the same discussion said that he had observed two patients suffering from growths in the rectovaginal septum. Both had been admitted to the University College Hospital during the year. Clinically in both cases the tumors were malignant, but sections showed apparently simple adenomatous tissue.

Fig. 3.—Adenomyoma of the rectovaginal septum. Gyn.-Path. No. 16079. A diagrammatic representation of the condition found at operation. The uterus contains several small subperitoneal and interstitial myomas. The cervix posteriorly is adherent to the rectum. Occupying the rectovaginal septum is an oval myomatous nodule, which projects into and narrows the lumen of the bowel. The overlying rectal mucosa is intact, but was the seat of several small rectal polypi. At operation the ureters were isolated and the uterus was then removed. The myoma in the rectovaginal septum, although intimately adherent to one ureter, was removed without injury to the ureter or to the rectum. For the histologic picture of the nodule in the rectovaginal septum see Fig. 4.

There were glands lined with a single layer of epithelium separated from the connective tissue by a definite basement-membrane. No proliferation of the epithelium was present. The connective tissue was fibrous and muscular and contained much lymphoid tissue. The squamous vaginal epithelium was thickened but not epitheliomatous. In neither case was an operation undertaken.

Mr. Herbert Spencer, referring to the cases mentioned by Mr. Clifford White, said that in the first case the growth occupied the rectovaginal septum below the posterior lip of the cervix. The tissues around the rectum were infiltrated up to the pelvic wall and the exudate was nodular. He said that microscopic examination showed the growth to be an adenomyoma. As the patient was in good health he proposed to keep her under observation for the present.

My two cases, while somewhat different from those of Jessup and Lockyer, definitely belong to the same group. Case 1 shows a very early stage, whereas Case 2 clearly shows the late stage of the disease.

AUTHOR'S CASES

CASE 1.—*Myomas of the uterus, adenomyoma between the cervix and rectum and associated with rectal adhesions.*

Mrs. G. P. E., seen in consultation with Dr. Samuel T. Earle, March 17, 1911, had several small polypi in the rectum. The uterus lay back on the bowel and was apparently adherent.

Operation.—March 22, Dr. Earle burned away five or six rectal polypi which were situated directly behind the cervix. Microscopic examination of the growths showed that they had been undergoing definite inflammatory changes, as evidenced by the quantities of polymorphonuclear leukocytes on their surface and by the fact that the underlying stroma contained great quantities of small round cells.

After Dr. Earle had removed the polypi, I opened the abdomen. The rectum was adherent to the posterior surface of the uterus low down. On the left side was a corpus-luteum cyst. This had evidently ruptured at some previous time, as the surrounding tissues were stained dark brown. I did a complete hysterectomy, removing the uterus and appendages, and then shelled out a myoma, 1 cm. in diameter, from the left side of the pelvic floor and another, about 4 cm. in diameter, with a secondary nodule, 1 cm. in diameter, lying on its surface. This combined nodule was situated between the rectum and vagina on the left (Fig. 3).

Oct. 12, 1911, the patient returned to me with signs of definite renal trouble. The roentgenogram showed a stone in the pelvis of each kidney. As the left kidney had apparently given more trouble than the right I removed the stone from the pelvis of that kidney. The patient improved markedly, but from time to time she experienced some pain in the right renal region.

Nov. 19, 1913, I removed a stone from the pelvis of the right kidney. The patient at present is in excellent condition.

Pathologic Report No. 16079: The uterus itself is only slightly enlarged. Scattered over the surface of the organ are several small fibroids. On microscopic examination the endometrium shows a definite endometritis.

The larger nodule lying between the cervix and rectum is 4 by 3 by 2 cm. and the smaller one 1 cm. in diameter. The larger nodule on histologic examination consists in the main of typical myomatous tissue, but at one point in a cleft (Fig. 4) are islands of typical uterine mucosa and at another point is a miniature uterine cavity. One of the smaller nodules contains one or two gland-like spaces.

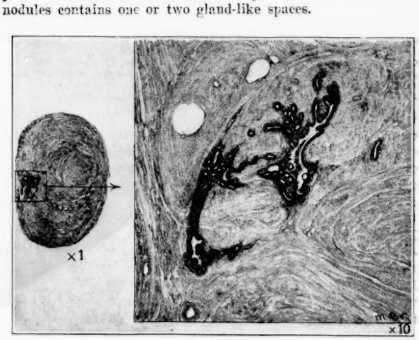

Fig. 4.—Adenomyoma of the rectovaginal septum. Gyn.-Path. No. 16079. For the gross appearances see Figure 3. The point from which the drawing was made is indicated in the small sketch on the left. The greater portion of the tumor consisted of myomatous tissue. A glance at the islands of mucosa is sufficient to establish the fact that they consist of typical uterine mucosa. The glands resemble ordinary uterine glands and are surrounded by the characteristic stroma. The picture is identical with that noted in adenomyoma of the uterus.

From the history it will be noted that in this case the cervix was adherent to the rectum. We have here a connecting link between the ordinary adenomyoma of the uterus and an adenomyoma involving the rectum. It is the only case that I have ever seen showing just this stage.

CASE 2.—*Adenomyoma in the left broad ligament intimately blended with the rectum.*

Mrs. G. S., referred to me by Dr. E. C. Taliaferro of Norfolk, Va., was admitted to the Johns Hopkins Hospital June

4, 1913. This patient was 37 years of age and two years before had been operated on in San Francisco, a myomatous uterus and enlarged ovaries being removed. At that time it was necessary to remove a small portion of the rectum also on account of dense adhesions. She had a stormy convalescence and shortly after the operation developed intestinal obstruction.

After leaving the hospital she had had a great deal of pain in the lower abdomen and for months had had almost continuous bleeding from the cervix. On admission I found a thickening behind the cervix and induration in both broad ligaments. Although the patient was much weakened from the continuous loss of blood we felt that something must be done. The cervix was dilated and on curetting we brought away what on microscopic examination proved to be perfectly normal uterine mucosa. The supravaginal hysterectomy had evidently been a high one.

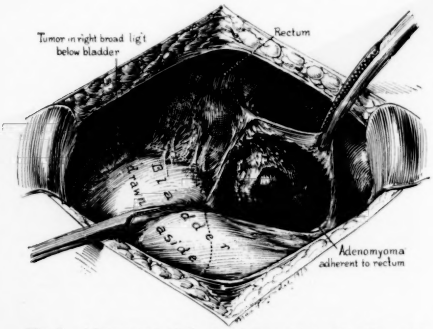

Fig. 5.—Adenomyoma of the broad ligament densely adherent to the rectum. A diagrammatic representation of the appearance of the pelvis at operation. As noted in the history, the uterus and appendages had been removed several years before. The bladder was densely adherent to the rectum. When the left broad ligament was opened up, a cystic mass was encountered, which was adherent to the pelvic wall and blended with the rectum. Its walls consisted of muscle and in its center was a cavity about 2.5 cm. in diameter, lined with a brownish-tinged membrane. The cavity contained chocolate-colored blood. Fig. 6 gives the histologic picture of the walls of this tumor. The right broad ligament also contained a firm mass probably similar in origin, but the condition of the patient did not warrant its exploration.

The right broad ligament was indurated and board-like and on the left side there was also thickening.

An attempt was made to build the patient up, but she continued to lose a great deal of blood and showed absolutely no improvement. A few days later we felt that it was imperative to explore the abdomen. When the operation was begun the pulse was 45. We found the rectum densely adherent to the bladder and the left broad ligament was filled with a somewhat cystic mass. Those assisting at the operation thought we were dealing with a malignant growth, which had spread into both broad ligaments. In order to determine definitely I cut the left round ligament, separated the folds of the broad ligament, and found we were dealing with a cystic mass 6 cm. in diameter (Fig. 5). This was gradually shelled out from its attachment to the pelvic wall, but by the time this had been accomplished the patient's pulse had become almost imperceptible, the rate being from 180 to 190, although she had lost practically no blood. We removed the greater part of the growth, but left a portion still attached to the rectum and did not dare explore the right broad ligament. A drain was introduced into the pelvis and brought out through the lower angle of the incision. When the cystic mass that was attached to the rectum was cut across we found that it contained one large irregular cavity about 2.5 cm. in diameter. This contained chocolate-colored fluid and was lined with a rather smooth-looking membrane which had a brownish tinge. The outer coats of the tumor looked like ordinary muscle.

On microscopic examination it was found that the wall of the blood-stained cyst was lined with one layer of cylindrical epithelium and that this rested on a definite stroma consisting of cells with oval vesicular nuclei. The more solid portions of the growth were made up of non-striped muscle fibers arranged in whorls and of quantities of uterine glands embedded in their characteristic stroma (Fig. 6). In some places only two or three glands with the surrounding stroma were visible, but at other points miniature uterine cavities were found.

In this case we were dealing with an adenomyoma, which had become densely adherent to the rectum. It was hoped that we might at a later date explore the right broad ligament, remove the cervix and then a portion of the rectum with which the growth was intimately blended. The patient, however, gradually became weaker and died, June 19, 1913.

Adenomyoma of the uterus is now a well-recognized pathologic lesion and in many cases can be diagnosed clinically. That it is not rare is evident from the fact that I was able to report over seventy cases from the gynecologic clinic of the Johns Hopkins Hospital. It was clearly shown that in the majority of the cases the glands of the adenomyoma came from the uterine mucosa. It was further pointed out that portions of the growth might be carried into the uterine cavity, forming submucous adenomyomas, and that in other cases portions of the adenomyoma were carried outward, forming subperitoneal adenomyomas, and that these subperitoneal growths, when released from the compressing influence of the uterine wall, sometimes become cystic, the cyst fluid being chocolate-colored—an accumulation of old menstrual blood. It was also demonstrated that an adenomyomatous uterus tends to become adherent to the surrounding structures.

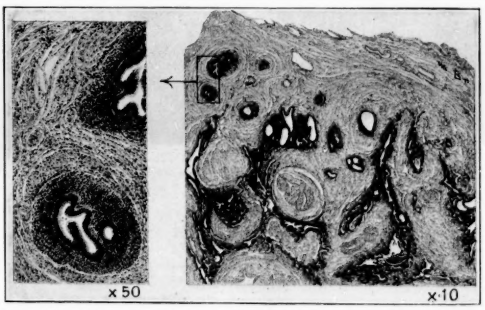

Fig. 6.—Adenomyoma in the left broad ligament. This section is from the tumor occupying the left broad ligament in Figure 5. The tumor consists of myomatus tissue everywhere traversed by typical uterine mucosa. The glands are surrounded by the characteristic stroma of the mucosa, which is sharply differentiated from the surrounding muscle. Some are dilated. A few of the outlying ones lie in direct contact with the muscle. The small area indicated by the arrow has been enlarged. Here we see that the glands are lined with one layer of cylindrical epithelium and that their surrounding stroma stands out in sharp contrast to the muscle.

I have reported elsewhere instances of adenomyoma of the round ligament[4] and tumors of the umbilicus consisting of adenomyomas.[5] All of these tumors, no mat-

4. Cullen, Thomas S.: Adenomyoma of the Round Ligament, Bull. Johns Hopkins Hosp., 1896, Nos. 62 and 63.
5. Cullen, Thomas S.: Surgical Diseases of the Umbilicus, THE JOURNAL A. M. A., Feb. 11, 1911, p. 391.

ter where situated, showed the same clinical reaction, namely, swelling up at the menstrual period.

In my group of adenomyomas of the uterus were several of cervical origin. If these grow posteriorly, owing to their inherent tendency to become attached, they will spread out into the rectovaginal septum, and become adherent to the rectum; or the peritoneal surface of the cervix may grow fast to the peritoneal surface of the rectum. In either case the rectum becomes fixed to the cervix.

My Case 1 is probably the earliest stage of such a condition. Lying in the pelvic floor were several myomas, the smaller ones consisting of simple myomatous tissue, the largest one measuring 4 by 3 by 2 cm. (Fig. 3) in diameter and containing a well-developed island of uterine mucosa (Fig. 4). It will be noted that even at this early stage the rectum was adherent to the posterior surface of the cervix. It was, however, possible to remove the uterus without injury to the bowel.

In Jessup's two cases the growth was so intimately blended with the rectum that in each it was necessary to remove a piece of the rectum with the uterus.

Lockyer's case represents a still further development of the adenomyoma. Such a wide area of the bowel was adherent that it was necessary to remove a complete segment of the rectum and to make a permanent colostomy.

In my Case 2, when the abdomen was opened, in San Francisco, the operator had found it necessary to remove a piece of the rectal wall with the adherent myomatous uterus. The patient's recovery was slow and complicated by an intestinal obstruction. When I saw the patient several years after the first operation she had had vaginal bleeding for months and was almost exsanguinated. When all attempts at building her up had failed, and the loss of blood still continued, as a last resort we did an exploratory operation, with the results recorded above. As noted from the history, the operation was necessarily an incomplete one, and hence it was impossible to tell the exact character of the thickening in the right broad ligament, but it was in all probability also adenomyomatous in character.

These cases are naturally of considerable interest to the surgeon. In the first place these growths, of course, are found only in women, and in the second place, histologically, they are not malignant; that is, they do not give rise to metastases. In the early stages, as shown in my Case 1, the growth may be removed without injury to the rectum. When the growth has invaded the rectum to a limited extent it is necessary to remove only a small portion of the anterior wall of the rectum and the defect can be closed, still leaving a bowel of sufficient caliber. When the rectal involvement is extensive, as in Lockyer's Case 2, resection of that portion of the bowel will, as a rule, be necessary.

The immediate differentiation between carcinoma of the bowel and adenomyomas of the rectovaginal septum is all-important to the surgeon. If the uterus contains myomas, the probability that the pelvic growth is an adenomyoma is strengthened. Further, if the growth appears to be muscular in origin this diagnosis is still more probable; if the growth is cystic, the diagnosis of adenomyoma is almost certain.

Cancer of the rectum starts in the mucous membrane, gradually infiltrates the bowel and then extends to the peritoneum and at a later stage may involve the cervix. Clinically, there is a history of hemorrhage from the bowel. In adenomyoma of the rectovaginal septum, on the other hand, the only rectal symptom is painful defecation, or there are obstructive symptoms. On rectal examination the bowel mucosa may be found puckered but still intact. Thus it is seen that the differential diagnosis is relatively easy.

Adenomyomas of the rectovaginal septum are benign so far as they do not give rise to metastases, and consequently if the entire growth be removed no further trouble need be feared. If portions be left these will continue to grow and will lead to more pelvic adhesions, and finally produce complications that may result in death or permanent invalidism. When cancer of the rectum is present the operation must of necessity be a much more extensive one.

This group of cases still more clearly emphasizes the necessity of a careful microscopic control of all rectal growths, as they might easily pass for rectal carcinomas and the cases be classified as permanent cures of rectal cancer, when the patient in reality never had cancer.

In cases of adenomyoma of the rectovaginal septum the ureters should be carefully isolated and the uterus then removed in its entirety as in the Wertheim operation. As soon as the vagina has been cut across the uterus and rectum are more mobile and can be drawn further up into the wound. The necessary oval or elliptic piece of rectum is now removed with the uterus and the bowel wound closed. The remaining stages of the operation are identical with those of the Wertheim operation and it will be wise to place a delicate protective drain in the pelvis, taking care, however, that it does not come in contact with the suture line in the bowel. The lower end of the drain emerges from the vagina.

When the adenomyoma involves a large part of the lumen of the bowel, it will become necessary to resect a segment of the bowel.

The glands in these growths undoubtedly arise from the uterine mucosa or from remnants of Müller's duct. If they were rectal adenomyomas, the glands would naturally be of the type composing the rectal mucosa.

The report of four cases in the course of a few months seems to indicate that adenomyoma of the rectovaginal septum is not rare; and with the more careful examination of all rectal or perirectal growths I feel confident that in the near future many more such cases will be recorded.

In conclusion I want to thank my friend, Mr. Max Brödel, director of the Department of "Art in Medicine," in the Johns Hopkins Medical School, for the excellent illustrations accompanying this article.

3 West Preston Street.

DANGERS ATTENDING INJECTIONS OF THE KIDNEY PELVIS FOR PYELOGRAPHY

J. M. MASON, M.D.
BIRMINGHAM, ALA.

Although pyelography was introduced by Voelcker and Lichtenberg[1] in 1906, its extensive employment in this country has been due, in large measure, to the work and writings of Braasch, of the Mayo clinic, in 1909 and subsequent thereto. Many shadow-casting substances have been tried, but collargol is the one which has been most generally used.

The beautiful results obtained in graphically depicting the shape and size of the kidney pelvis and ureter by means of pyelography, and the ease of its employment

1. Voelcker and Lichtenberg: München. med. Wchnschr., 1906; Cystographie und Pyelographie, Beitr. z. klin. Chir., Festschrift f. Czerny, 1907.

in connection with ureteral catheterization, together with its alleged freedom from danger, have led to its general employment as a diagnostic measure in kidney surgery.

Prior to 1913, in the reports from the Mayo clinic, I have found no reference to any injurious effects on any of the kidneys subsequently subjected to operation, though Braasch[2] states that he had frequently observed collargol retained in the kidney pelvis into which it had been injected several weeks before, and that its presence does not interfere with wound-healing. During 1913 reports from this clinic would seem to indicate some modification of the views previously entertained as to the innocuousness of injections into the kidney pelvis, and they will be referred to again.

Fig. 1.—Outer surface of kidney in Case 1, showing discolored nodules on surface.

Fig. 2.—Section of kidney in Case 1, showing collargol-stained infarcts.

In January, 1913, Thomas,[3] of the Mayo clinic, writes:

> The frequency of overdistention and renal colic resulting from injecting the pelvis of the kidney and ureters with shadow-casting fluids by means of a syringe, suggested to me the idea of using an apparatus with only sufficient force of gravity to cause the flow to reach the kidneys.

With this gravity method, only one colic resulted in more than fifty injections.

REPORTS OF CASES

CASE 1.—In February, 1913, there came into my hands a case of hydronephrosis due to ureteral stricture, in which I had occasion to inject the pelvis of the kidney with collargol. Though I had often made use of pyelography without colic or constitutional disturbance, this patient suffered intensely, and the injection was followed by nausea and vomiting, and by a slight rise of temperature for four days. Twenty-five c.c. of 10 per cent. solution were injected before the slightest pain was experienced.

When this kidney was removed five days later, its surface presented numerous nodular elevations showing black discoloration beneath the capsule. On section, each nodule proved to be the outer surface of an infarcted area, each infarct being deeply stained with collargol, and the different infarcts showing varying degrees of inflammation. No collargol remained in the pelvis.

CASE 2.—A few days later a patient with renal tumor, which proved to be a hypernephroma, came to me, and again collargol was injected.

Being mindful of the condition of the kidney following the injection in the former case, I was particularly careful with this injection, using 12 c.c. of 10 per cent. solution and stopping on the first appearance of pain, and left the catheter in the ureter until I thought that all the collargol had run out. This injection was practically free from constitutional reaction. On removing the tumor ten days later, I found that this kidney also presented a few of the discolored nodules on its surface, and, on section, the same black-stained infarcted areas seen in the former case. The pelvis contained a quantity of precipitated collargol.

The following report of the microscopic examination of the infiltrated areas of the kidneys is submitted by Dr. E. M. Mason:

"Irrespective of the primary pathologic condition in the kidney, one finds, in all sections, wide-spread deposits of collargol. Throughout the tubules collargol-stained casts and granular deposits are numerous, and many of the malpighian corpuscles show collargol masses within the capsule of Bowman.

"No collargol is found in the blood-vessels or interstitial tissue of normal portions of the kidney, but the infarcted areas show large and small collargol masses both in the broken-down tubules and dispersed throughout the necrotic tissue as high up as the surface of the kidney.

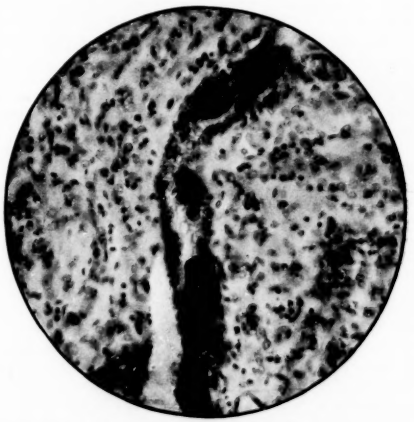

Fig. 3.—Collargol lying in the lumen of a straight tubule. Case 1; × 230.

"No definite evidence of inflammatory reaction can be seen in the collargol-containing tubules outside the necrotic areas, and there is no cellular infiltration of the adjacent interstitial tissue.

2. Braasch, William F.: Recent Developments in Pyelography, Ann. Surg., 1910, lii, 645.

3. Thomas, G. J.: An Apparatus for the Injection and Lavage of the Pelves of the Kidneys and Ureters, THE JOURNAL A. M. A., Jan. 18, 1913, p. 184.

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"In some areas however, tube-casts, both stained and unstained, are more numerous than one would expect to find as a result of the primary pathologic condition."

Having considered up to this time, along with others, that the pain following injections into the pelvis was due to colic from overdistention, I was surprised at the condition of the kidneys in my cases, and set about

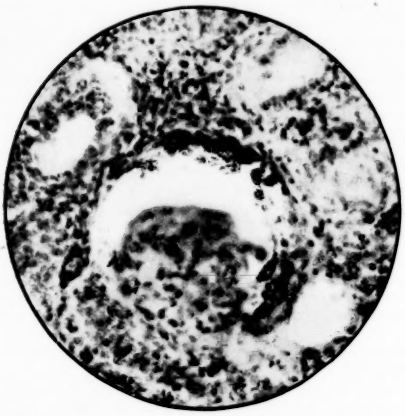

Fig. 4.—Collargol inside the capsule of a glomerulus, Case 1; × 230.

investigating the possible injurious effects of injections into the kidney pelvis.

In discussing my cases with Dr. G. S. Graham, professor of pathology in the Graduate School of Medicine of the University of Alabama, I learned that he had some sections of a kidney which he had seen in the laboratory of Prof. F. B. Mallory of Boston, which showed conditions similar to my own. Through his kindness I am able to present illustrations of these sections; and, through the kindness of Professor Mallory, I am able to give a brief description of the microscopic appearance of the kidney.

"Opposite hilum and toward one end, kidney presents a rounded elevation 4.5 cm. in greatest diameter, dark red about periphery, with irregular, fine, slate-colored areas in central portion. Capsule has been torn away over part of this surface and is ragged and injected. Surface of kidney beneath is smooth. Section shows under this elevation an area roughly parallelogram in shape, extending 32 mm. to the pelvis. Outer end is 25 mm. wide and inner is 22 mm. wide. This area consists roughly of three zones of about equal width; the inner is apparently the central portion of a pyramid showing striations, and is red in the center. Middle zone is a ring around this, is elevated and consists of yellowish-gray, pinhead areas, many of which are red points. The uneven junction between these two zones is dull slate-color with some dark-gray points. Outer zone is dull gray, and is interrupted by cortical tissue at medial distal corner. Smear from second zone shows polynuclear leukocytes but no tubercle bacilli or other organisms. Frozen sections show black deposits."

Professor Mallory states that "the collargol was injected into the kidney tissue as a result of running the catheter too far into the pelvis of the kidney. . . . Evidently the point of the catheter went into a calix and the fluid was injected under pressure into that part of the kidney which drained into that calix."

He mentions having seen one other case in which the kidney was damaged by a collargol injection.

In 1913 Tennant[4] reported a case which presented pathologic conditions in the kidney identical with those that I had observed.

Two injections were made into each kidney pelvis at intervals of five weeks. Pain followed each injection, particularly on the right side after the last injection.

Roentgenograms showed not only the outline of the kidney pelvis, but also a shadow well out in the parenchyma, extending from the center of the right kidney, and infiltrating its upper pole. This shadow was not understood or explained until operation two weeks later, when, after the kidney was freed from a great amount of inflammatory adhesions, an infarct 2 inches wide, and extending down to the renal pelvis, was exposed and resected. Microscopically, the same conditions were present as reported in my cases.

Kelly[5] says that in two cases in which he operated after collargol injection the perirenal tissues were stained a greenish black, the collargol having passed through the intact pelvis. In neither case was an excessive amount used, nor was it run in rapidly. He notes that one case required prolonged drainage.

Stover, in a foot-note to Tennant's paper,[4] states that out of about forty instances of injections of the kidney pelvis under pressure, in early hydronephrosis due to ureteral obstruction, he had seen only two cases in which there was infiltration of the renal parenchyma.

While still insisting that ureteropyelography has been without fatality or permanent injury in his hands in more than one thousand cases, Braasch* states that instances have been reported by Buerger in which

Fig. 5.—Collargol in the center of an abscess, Case 1; × 60.

deposits of silver, with surrounding foci of evident suppuration were found in the cortex of a kidney which was

4. Tennant: The Cause of Pain in Pyelography, with Report of Accident and Experimental Findings, Ann. Surg., 1913, lvii, 888.
5. Kelly and Lewis: Silver Iodid Emulsion: A New Medium for Skiagraphy of the Urinary Tract, Surg., Gynec. and Obst., 1913, xvi, 707.
* Braasch, William F.: Recent Progress in Ureteropyelography, Jour. Michigan Med. Soc., April, 1913, No. 4.

removed following pyelography, and that three similar cases have been observed in the Mayo clinic. He also observed two cases of hydronephrosis injected with methylene-blue solution, which showed, at operation, cortical areas colored with the distending solution.

Fig. 6.—Outer surface of kidney in Case 2, showing blackened nodules on the surface.

Tennant's case, however, is the only one reported in detail in this country, up to the present time.

On reviewing foreign literature I find the following:

A report by Oehlecker,[6] 1911, of a case in which collargol-stained infarcts and microscopic findings exactly like those of Tennant and myself followed injection for pyelography.

A report by Troell,[7] in 1913, of a case in which the injected collargol had ascended into the parenchyma of the kidney, and was found in the tubules and in the capsules of the glomeruli.

A report by Zachrissen,[8] in 1911, of a case in which, by mistake, 14 c.c. of collargol solution were injected into the wrong kidney. This was followed by pain for five days, fever fourteen days, tenderness for some time, and the presence of casts in the urine from that side at the end of a year. The roentgenograms showed, as in Tennant's case, the outline of the pelvis, and also distinct dark shadows or streaks in the interior of the kidney, indicating that the injection had "certainly extended into the tubuli recti, and perhaps even higher."

A report by Roessle,[9] in 1910, of a fatality which he considered due to collargol poisoning, following an injection for pyelography; and, while this death might have been due to other causes, the kidney showed the presence of the injected collargol inside the tubules, and corresponded closely with the other cases reported.

Ekehorn,[10] operating five days after collargol injection, found marked renal edema, and Jervell[11] mentions observing a "wedge-shaped gangrenous area in the kidney" after the injection of collargol.

Experiments of Blum, Oehlecker and Tennant show results very similar to the observations on human beings.

Blum,[12] using cadaver kidneys or extirpated kidneys, found that collargol passed through the ruptured collecting tubules, along the urinary canals and lymph-spaces of the kidney, and under the capsule. He noted some instances of severe cauterizing effects on the mucosa of the kidney pelvis.

Oehlecker,[6] using cadaver kidneys, found that collargol remained in the pelvis and in the calices, unless considerable pressure was used, when it was possible to force it into the tissues of the kidney.

Tennant,[4] using fresh pig kidneys within one hour after removal from the animal, found that "infiltration of the parenchyma and free diffusion under the capsule of the kidney were almost simultaneous with the distention of the renal pelvis." This occurred at once with 18 c.c. of collargol at a pressure of 240 mm. of mercury, in one minute with 10 c.c. at a pressure of 10 mm. of mercury, and in five minutes with 14 c.c. at a pressure of 50 mm. of mercury. Sections of his kidneys showed the same microscopic appearance as in his clinical case, except that no collargol was found in the capsules of the glomeruli. From these observations Tennant concludes that pain during injections of the kidney pelvis is not simply an indication of colic from overdistention of the pelvis, but that it indicates, or may indicate, a much more serious condition, namely, infiltration of the renal parenchyma with the injected material. That this diffusion may take place simultaneously with the filling of the renal pelvis, and, presumably, at the time of the appearance of the pain, his experiments abundantly prove.

It will be seen that in all the cases presented in which the reports have been given in detail, as well as in all the experimental cases, the pathologic changes have been practically identical with my own; and we may safely infer that the gangrenous wedge-shaped area in Jervell's case belongs in the same group, and that the roentgenograms in Zachrissen's case show that his patient's kidney received the same sort of injury.

Fig. 7.—Collargol-stained casts in straight tubules from Case 2; × 90.

By collecting these isolated clinical and experimental reports and comparing the findings, we are able to show, by the identity of the pathologic conditions, that a definite sequence of events follows injection of the renal

6. Oehlecker: Uebersichtsaufnahmen vom uro-poetischen Systeme (Pyelo-Kystographie), Fortschr. a. d. Geb. d. Roentgenstrahlen, 1911, xvii, 195.

7. Troell: Fall af pyelografi, där kollargol inträngt injurens urinkanaler och Malpighiska kroppar, Hygiea, Stockholm, 1913, lxxv, No. 2.

8. Zachrissen, 1911. Nord. Med. Ark., Abd. 1, No. 2.

9. Roessle: München. med. Wchnschr., 1910, No. 5.

10. Ekehorn, quoted by Key: Hygiea, 1911, No. 2.

11. Jervell's case is referred to by Strassmann, Key, and Troell, but no record of its publication has been found.

12. Blum, Victor: Ueber den Werth der Pyelographie und anderer Methoden zum Nachweis von Dilatationen im Nierenbecken; Wien. med. Wchnschr., 1912, No. 19.

pelvis if the intrapelvic pressure is raised beyond a certain unknown point.

This sequence consists in the filling of the pelvis, and the ascent of the injected material, along with any infectious matter in the pelvis, into the straight and convoluted tubules and into the glomerular capsules. This may be followed by the rupture of the tubules with dissemination of their contents into the surrounding tissues, with the production of infarcts and abscesses, and progressive inflammation of the kidney and perirenal tissue.

The part that the collargol itself may play in the destructive changes is much in dispute. Some observers attribute severe cauterizing and irritating effects to this agent, others asserting that there is no injurious effect on the tubular epithelium or other parts of the kidney tissue. As collargol is the substance almost universally employed in the injections, we have no other drug or chemical used under like conditions of pressure in a series large enough for comparison.

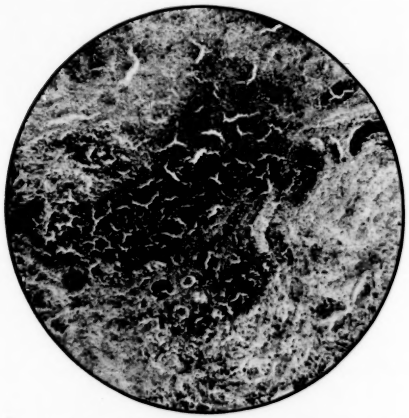

Fig. 8.—Collargol in tubule, Case 2; also broken-down kidney-tissue with collargol disseminated throughout the tissue; × 60.

Strassmann,[13] in 1913, reviewed the question, and reached conclusions differing from the findings above set forth. He criticizes the experiments of Blum and Oehlecker, on the ground that there is too great difficulty in distinguishing between cadaveric changes and necrosis due to collargol, unless absolutely fresh material were used; also on the ground that Blum used too great pressure in his injections, and that the conditions surrounding his experiments were not normal and not comparable with experiments on the living. He thinks that conclusive experiments can be made only on living animals. He argues conclusively that the death which Roessle ascribed to collargol poisoning may have been due to some other cause. His explanation of the infarcts observed by Oehlecker is that the tumor compressed the neck of the renal pelvis and interfered with the discharge of the collargol and thus forced it into the tubules.

13. Strassmann, Georg: Effect of Collargol Injections on the Kidney and Kidney Pelvis, Ztschr. f. Urol. Chir., 1913, 1, Nos. 1 and 2.

Together with Voelcker, he conducted a series of very delicate experiments on rabbits. Under anesthesia, the ureters were exposed and ligated, and the kidney pelves injected with collargol under the guidance of the eye, the amount of distention being easily seen. The fluid was retained in the pelvis for varying lengths of time, after which it was allowed to flow out and the kidney was removed for examination.

A summary of his observations is as follows:

From the renal pelvis occurs a rapid diffusion of the solution into the connective tissue surrounding the kidney. The renal capsule is swollen shortly after injection and distinctly blackened in some portions. The injected collargol ascends, in part, into the connective tissue and lymphatic spaces of the kidney, particularly *in the space around the urinary canals*, and may ascend as far as the cortex. One may then see the urinary tubules surrounded by black masses. The intensity of discoloration of the capsule was directly proportionate to the time the collargol was retained in the pelvis.

The lumina of the tubules remained free. He states that, inasmuch as his injections were made under slight or only moderate pressure, the collargol advanced only as far as the renal pelvis. He asserts that there was no harmful effect on the pelvic mucosa, and that the silver masses surrounding the tubules exerted no injurious effects on the latter. He states that he used quantities of fluid in excess of the pelvic capacity, and that such quantities need not cause any injury.

He does not report the production of any infarcted areas; and, as his assertion is that the tubules remain free from the collargol and that the collargol ascends around the tubules, there could be no rupture of the tubules from pressure inside their lumen. His explanation of Oehlecker's infarcts may have been correct in that instance, but does not hold good in other cases.

His results, at such variance from the data here presented, prove only that it is possible to inject the kidney pelvis without damaging the parenchyma, an operation which has been done often enough for us to admit without question.

They do not prove that injections are free from danger, nor, in the light of the further evidence here presented, that the tubules and renal parenchyma may be expected to escape injury if the pressure within the pelvis is raised beyond a certain point.

It is scarcely possible to carry out, in man, an injection of the renal pelvis under the delicate control of pressure and pelvic distention that Strassmann exercised in his experiments, with the ureter and kidney in plain sight. We can only approximate his work clinically, by making injections with the utmost gentleness, and should avoid them if there is any interference with the rapid return flow of the injected material.

In an endeavor to account for the difference between Strassmann's pathologic observations and those of others, it has occurred to me that in his experiments he observed the process of normal absorption from the kidney pelvis of material present therein, but not under tension; whereas in the other cases the process was not one of passive absorption, but of active diffusion of the material under the influence of hydrostatic pressure inside the kidney pelvis.

This will explain, also, why so many injections have safely been made, and why such injuries as I have reported sometimes occur.

In his earlier writings Braasch advocates pyelography in practically every kidney disturbance requiring inves-

tigation; in one paper enumerating no less than fifteen conditions in which it was indicated, including hydronephrosis, pyelitis, pyonephrosis and renal tuberculosis.[2]

In his papers for 1913, some modification of his former teachings is found, in that he states that it is contra-indicated in large hydronephroses, and in any case in which the pelvis cannot readily drain itself of the injected solution; that in malignant renal tumors it should not be used except when other means of diagnosis fail to identify the tumor;[14] that in his experience, severe reactions following pyelography have been due either to errors in technic or to lack of care in the selection of cases; and that pyelography should not be employed unless the existence or nature of a lesion in the urinary tract cannot be diagnosed in any other way.

To lessen the danger of overdistention, the gravity method of Thomas, or the still more accurate method of Tennant, who used a mercury manometer for estimating pressure, should be used. Even then the danger is not eliminated, for as yet we have no method of estimating the amount of pressure that may be safely used in any given case; and, as this must vary in every case, a standard for comparison must be very difficult to establish.

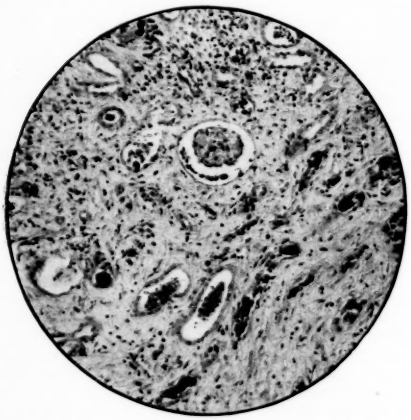

Fig. 9.—Section from Prof. Mallory's case; collargol in tubules and inside the capsule of a glomerulus; × 110.

The cases here presented prove that solutions injected into the kidney pelvis may, under circumstances which are not entirely under our control, ascend into the tubules and out into the surrounding kidney tissue carrying with them such infectious material as may be present in the pelvis and set up serious inflammatory lesions. With this clearly established, it would seem that injections are contra-indicated in the presence of infection in the kidney or kidney pelvis, and in cases in which the integrity of the kidney has been impaired by injury or disease.

14. Braasch, William F.: Clinical Data on Malignant Renal Tumors, THE JOURNAL A. M. A., Jan. 25, 1913, p. 274.

Style.—Nothing is easier than to write so that no one can understand; just as, contrarily, nothing is more difficult than to express deep things in such a way that every one must necessarily grasp them.—Schopenhauer.

RADIUM IN THE TREATMENT OF BLASTOMYCOSIS

WITH REPORT OF A CASE

FRANK EDWARD SIMPSON, M.D.
CHICAGO

In a previous article[1] the case now reported more fully was briefly referred to.

So far as I can learn, radium has not been used hitherto in the treatment of blastomycosis. *A priori* it was expected that radium would be effectual in this disease, and the opportunity of treating a case presented itself in May, 1913.

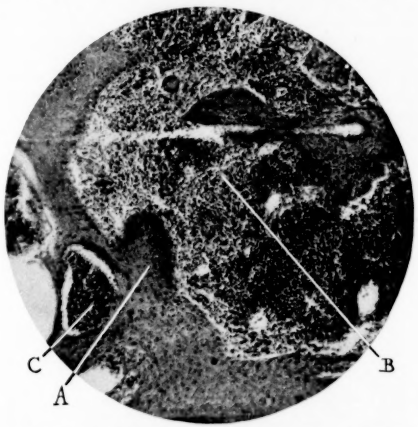

Fig. 1.—Transverse section showing proliferated epithelial layers (*A*) and one large (*B*) and one small (*C*) abscess; × 90.

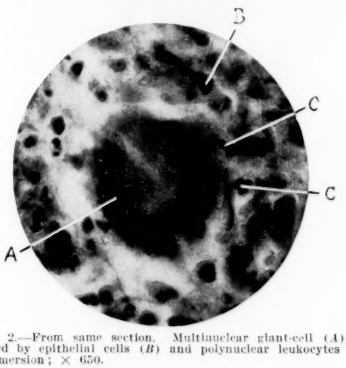

Fig. 2.—From same section. Multinuclear giant-cell (*A*) surrounded by epithelial cells (*B*) and polynuclear leukocytes (*C*); oil immersion; × 650.

History.—The patient, a man, aged 24, came under observation at the Chicago Policlinic Hospital with a lesion at the inner canthus of the left eye. The lesion, which was of three months' duration, involved the upper and the lower lid and covered an area of about 2 sq. cm. (Fig. 3). It was of

1. Simpson, Frank E.: Radium in Skin Diseases, THE JOURNAL A. M. A., July 12, 1913, p. 80.

verrucous aspect, but at the periphery an inflammatory border ⅛ inch wide was present containing a few abscesses the size of pin-points. Pus could easily be squeezed from between the papillae of the patch. The clinical diagnosis of blastomycosis was made. In a smear from the peripheral abscesses, Dr. J. S. Lindholm demonstrated the blastomyces. The patient had previously sought treatment from several oculists in another city and had refused excision, which had been advised.

Treatment.—Radium treatment was tentatively advised. A radium varnish applicator, one-quarter strength, containing 0.04 gm. of radium-barium salt was easily applied. An exposure of three hours was given in fractional doses in the course of three weeks. A slight inflammatory reaction ensued. This caused no pain and was followed by the complete disappearance of the lesion. A few weeks later two minute points at the extremities of the lesion on the upper and lower lids were noted by the patient. An exposure of fifteen minutes was given to each place with complete recovery (Fig. 4), which has been maintained to the present time.

Result.—The beauty of the cosmetic result cannot, I believe, be exceeded by any other method. Not the slightest tendency to ectropion can be observed, and the site of the lesion is almost imperceptible. When the patient was first seen a small piece of tissue was removed from the lower part of the lesion for microscopic examination. Dr. Maximilian Herzog kindly examined the sections, and I am greatly indebted to him for the following report:

Fig. 3.—Patient with blastomycosis.

Fig. 4.—Patient after recovery.

Microscopic Report.—A small piece of tissue was fixed in Zenker's solution, subsequently embedded in paraffin, sectioned and stained. The microscopic examination failed to show the characteristic double-contoured, budding blastomyces, but the histologic structure found was that seen in typical blastomycotic dermatitis. The sections show the following:

The epithelial layers are very much thickened and the epithelial masses here and there rise in irregular projections. The interpapillary eptithelial pegs, widened and much elongated, project deeply downward. The proliferated epithelial masses are riddled with small abscesses, varying from microscopic to pin-head size (Fig. 1); hence some of them clearly can be seen with the naked eye in the sections. Loosely attached to the outermost epithelial cells are completely or partially desquamated horny scales. There is no clearly recognizable stratum lucidum, but the epithelial cells next to the horny layer show a rather excessive amount of granular keratohyalin. The epithelia next to the stratum granulosum are quite normal in character with well-defined intercellular prickles; the nuclei are normal in appearance; karyokinetic figures here and there are seen. The cells situated in the older layers of the elongated and widened interpapillary pegs are somewhat degenerated; the prickles are not distinct; the nuclei are shrunken and situated in a vacuolated cell protoplasm. Migrated polynuclear leukocytes are found between the epithelial cells.

Some of the larger abscesses have broken toward the surface, but they are still partially covered by desquamated horny scales. The smaller abscesses are completely surrounded by epithelial layers. The abscesses contain numerous densely crowded polynuclear leukocytes, mostly of the neutrophil variety, few eosinophilic cells only, red blood-corpuscles and epithelioid cells, the latter evidently derived from fixed connective-tissue cells, and occasionally a multinuclear giant-cell (Fig. 2). A remnant of a vessel also was seen here and there, showing that the abscesses are primarily developed in connective tissue (papillary layer) and only later on become surrounded by the proliferating epithelial cells. The papillae between the enlarged epithelial pegs and the cutis generally show an extensive inflammatory infiltration of both proliferated fixed connective-tissue and wandering leukocytic cells.

59 East Madison Street.

MENTAL HEALING

AN ADMONITION

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We have all heard much within the last few years about psychopathology and psychotherapy. The very words, especially the latter, have crept into the daily press and thence into focal interest of the lay mind. Popular books have been published on the subject, and soon thereafter, garbled by dilettantes, sundry articles in monthly and weekly magazines. At the same time the stage took up the theme of all-influencing and influenceable mind. In consequence, the layman to-day is doubtless as well informed on the subject—most superficially of course—as the majority of physicians. Religious cultism with metaphysical offshoots, new thoughtists, chiropractics, etc., have sprouted like mushrooms over night. These "schools" have overrun the land and with undaunted persistence have spread and fastened their propagandas until they stand firmly as monuments of shame to the poor belated imagination and poorer insight into human nature of the very men who should be trained to know men best. The secessionists to these ultraschools run up to vast thousands—and no sooner do they enter than they themselves become charged with proselytism and prove an attracting source on every side.

It has taken long for the physician to recognize this; he grasps it but vaguely now—or he would stand aghast. Countless times has he read of the power of mind over body and functions—but all the while kept his myopic eyes just on disease—disease, the cause of which was assiduously assayed and treated with scarcely a thought of the patient who stood beside. But disease does not always respond to treatment, or only but slowly, or indeed but poorly in poor hands. Beside there are a host of morbid conditions which become protracted by inviting attention on them. And sick mortals are impatient. In the meantime the afflicted have heard the call "the doctors gave him up, but the 'healer' got him well"; and with curiosity mixed with hope, infected with the suggestion inherent in the thing "yes, maybe it *is* so"—urged the trial, and expectant and attentive, saw the "miracle" come true.

Who doubts it for a moment? Who that knows but an iota of the psychology of *expectant attention* will deny its plausibility, or *can* doubt it to be true! And who among us has not now heard of patients doing poorly in medical hands who prospered when they took up "Science"? Do not our own colleagues recommend "healers" for functional disease, for "imaginative troubles and things"? And who does not notice with alarm the rise of cult after cult, the glaring prosperity of these churches, the sprouting of proselytes in every town—

they have long since entered the universities—and the mass of books and publications launched in the cause? Indeed, there are many cures in such hands and we must recognize them, even though we perceive the dangers too in their utter lack of scientific knowledge and know their grave mistakes. Is there then a specific healing unknown to medicine and ineffectual in physicians' hands, so that we must call in the stranger's aid? What then is the secret of this world-wide migration to another fold, this lost respect for our traditions, this spreading hope for health in a faith that makes one whole?

The history of faith-healing — of psychic therapy — goes back to the beginning of recorded time. It had its uphill periods of interest and lapses of neglect—for even Plato[1] reproved the physicians of his age for treating the body as though it had no soul—but from then unto the present, whether in the incensed fanes at Nineveh or in the "office" of our own nostrum-vending days, the witchery of voice and eye, the magic of personality, the fervor of religion, the awe of things strange and new, all wove a spell on the mind that made for health. Many were its masquerades, from magic and occultism, through magnetism, mesmerism, tractorism, the lure of words, amulets, reliques, holy grottoes, pilgrimages to tombs of the dead, anon to the glamor of names, the acclamation of labels,[2] the "imported," the "electric,"[3] the religiomysticism of to-day—Theosophy, Christian Science, Emmanuelism, New-Thoughtism, etc. —and finally the sexuo-analytic with its secret singular allure. And what of the thousand drugs that cured and now are proved inert?[4] All masks for psychic forces.

What as physicians do we know, definitely and scientifically, about this activity, this energizing power in the mind which the history of medicine throughout the centuries has taught us can be awakened in a thousand different ways, and which once activated has such immense influence on metabolism, the physiologic functions, the very vitality of the body it controls? What do students learn, actually and practically learn, about it? Is not medicine as taught to-day a matter of disease and the treatment of disease? Do we think for a moment about personality, and variations of reactions in different persons, or of interrelations of mind and body? In short, we have for the most part forgotten that we are dealing with human beings, individuals, in whom as Virchow said, disease is not an entity but merely shows the course of the vital processes under altered conditions. As for the mind, so impalpable a thing could be left to the metaphysician and the quack.

Nor must that platitude be constantly repeated that mentally one can influence but functional disorders—belittling these as if they were just, in layman terms, "imagination." Of course, in the field of psychogenic disorders (and it is a vast field, let it be remembered) one can accomplish most. It is in this field that psychotherapy is, so to speak, *specific*. But the mind, we have said, may also influence metabolism, secretion, etc.; therefore, it may directly or indirectly also influence organic change.[5] Long ago Galen[6] said that he worked the most cures in whom most had faith; and Paracelsus, centuries after, wrote, "Faith produces miracles, and whether the object of your faith be real or false, you will nevertheless obtain the same effect." So we also read in Burton's "Anatomy of Melancholy" how fancy and a good conceit may cure just as it may bring on disease:

> As some are so molested by phantasy, so some again by fancy alone and a good conceit are as easily recovered. We see commonly the toothache, gout, falling-sickness, biting of a mad dog and many such maladies, cured by spells, words, characters and charms; and many green wounds by that now so much used *unguentum armarium*, magnetically cured. . . . All the world knows there is no virtue in such charms or cures, but a strong conceit and opinion alone. . . . An Empirick oftimes, and a silly Chirurgeon, doth more strange cures than a rational Physician. Nymannus gives a reason, because the Patient puts his confidence in him, which Avicenna prefers before art, precepts, and all remedies whatsoever.

In our more modern times, Osler, one of the foremost of us all, has reiterated this truth, writing:

> Yet, after all, the psychical method has always played an important though largely unrecognized part in therapeutics. It is from faith which buoys up the spirit, sets the blood flowing more freely, and the nerves playing their parts without disturbance, that a large part of all cures arises. Despondency, or lack of faith, will often sink the stoutest constitution almost to death's door; faith will enable a bread pill or a spoonful of clear water to do almost miracles of healing when the best medicines have been given over in despair. The basis of the entire profession of medicine is faith in the doctor and his drugs and his methods.

Of the truth of such statements as these there is no doubt. Nor can there be a doubt as to their profound importance. And yet is the subject actually allotted more than foot-note's space within the minds of physicians or the curriculum of medical schools? What student goes forth with a knowledge that enables him to say: I need no "healer," "new thoughtist" or other only too often dangerously unscientific and misleading

1. Plato seems to have had an astonishingly definite idea of this entire matter. In his Dialogue of Charmides, Socrates says: "So neither ought you to attempt to cure the body without the soul; and this," he said, "is the reason why the cure of many diseases is unknown to the physicians of Hellas, because they are ignorant of the whole, which ought to be studied also; for the part can never be well unless the whole is well" . . . "And therefore if the head and body are to be well, you must begin by curing the soul; that is the first thing. And the cure, my dear youth, has to be effected by the use of certain charms, and these charms are fair words; and by them temperance is implanted in the soul and where temperance is, there health is speedily imparted, not only to the head but to the whole body. . . . For this," he said, "is the great error of our day in the treatment of the human body, that physicians separate the soul from the body." (Dialogues of Plato trans. by Jowett, Edit. of Scribner's 1911, p. 10.)

2. How vast the output of patent and proprietary drugs and concoctions used by the people and prescribed by physicians who know not a whit of what is contained—but recognize its worth because a folder says it's so!

3. One thinks with a smile of a decade of "electric belts," selling at forty to one hundred dollars apiece—the great panacea for lost manhood and lost womanhood!

4. They cured while new, while it was said this is *the* new cure, etc. Even Plato has commented on the psychic ingredient of drugs. "I replied that it was a kind of leaf (ancient a cure for headache) which required to be accompanied by a charm, and if a person would repeat the charm at the same time that he used the cure he would be made whole; and that without the charm the leaf would be of no avail." (Dialogue of Charmides.)

5. Think for instance of arteriosclerosis and subsequent nephritic trouble induced by long-standing nervous and mental strain. These are the very cases so often helped by "healers" when physicians who have only drugs to offer fail. This does not mean that the "healer's" method is rational or should be encouraged. His method is most irrational, most dangerous, and should be drastically condemned; for he might as easily overlook a diabetes and the patient die (such a case has just occurred in Berlin) or a neoplastic or pyogenic process necessitating rapid surgical intervention. Nor does it mean that because certain psychologic processes set into activity are potentially remediable, that we should advise ablution at Lourdes, or the carrying of amulets, etc., for rheumatism! No, the drug, the orthopedic procedure the fomentation is of importance, is *the* therapeutic measure in its place, namely, when indicated. Hence the careful diagnosis! yet—and this is to be remembered—psychotherapeusis is at *all times* helpful, but when especially indicated, of paramount importance. This is the lesson for physicians to learn; and still more, that psychotherapy does not mean Christian Science any more than it does occultism. It means a knowledge of certain psychologic factors and the endeavor, thereby, to revive the normal functioning by making mental readjustments and stimulating and directing potential energy into the proper paths.

6. According to Burton ("Anatomy of Melancholy") "'Tis opinion alone (saith Cardan) that makes or mars physicians, and he doth the best cures, according to Hippocrates, in whom most trust."

reasoner to help me in my practice; I too comprehend and know how to wield those mental forces that aid and cure—and using the lancet, serum, Roentgen ray, and every appurtenance that science brings to light, beside, do not forget but rather all the more rationally employ the word, the "charm" — as Plato puts it — and so am likewise able to create that neurodynamic flow within the mind which, once engendered, itself irradiates into the cells, and pulses on to health!

60 West Eighty-Fifth Street.

PRIMARY CARCINOMA OF THE PANCREAS

IN A PATIENT TWENTY-TWO YEARS OLD.

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The following case is recorded not only to emphasize the fact that cancer is by no means confined to the later period of life, but also as an illustration of the difficulty, often enough encountered even by surgeons of wide experience, of distinguishing between two pathologic conditions, the one an inflammatory process amenable to treatment, the other, a most deadly and hopeless form of malignant disease.

To the works of such men as Riedel, Mayo Robson, the Mayos, Deaver and Moynihan, we owe a definite knowledge of chronic interstitial pancreatitis, its etiology and treatment, but we have not, I think, arrived at any sure reading of clinical signs, by which this condition can, with certainty, be distinguished from pancreatic carcinoma. As a matter of fact, an exploratory incision will not always suffice to clear up the diagnosis.

The rule of Courvoisier may enable us with reasonable certainty to exclude gall-stones as the cause of obstructive jaundice, but does not enable us to say whether the jaundice is due to pressure on the duct by malignant growth or by swelling of the pancreatic substance due to inflammation. Although, as William J. Mayo points out, "it is the rule that primary jaundice with the presence of a distended gall-bladder indicates malignant disease— an exception must be made of the not infrequent cases of pancreatitis which do not have their origin in gall-stones, and therefore may have a distended gall-bladder."[1] In this connection, too, the words of Moynihan are instructive. Speaking of pancreatitis, he says, "Its mimicry of carcinoma may be complete. Painlessly and progressively the patient may develop jaundice which continues to deepen until the 'black jaundice' of the older writers can be recognized. There is great loss of weight, and prostration, hebetude and misery, though often the appetite is unimpaired. The liver enlarges and the gall-bladder distends to a degree which allows it to be seen and felt protruding below the rib margin. In accordance with the law of Courvoisier we assume that such a dilatation of the gall-bladder is due to causes other than stone. An examination of the stools might show a complete absence of bile pigment, and this may seem the most conclusive evidence of carcinoma, for a chronic inflammation, however inveterate, rarely causes an impenetrable block to the passage of bile."[2] He goes on to say that such patients should be operated on, however positive the diagnosis of malignancy may be. "There will be benefit in either case. I have patients still living on whom I operated four, six and seven years ago, in the confident belief that they suffered from carcinoma, and would shortly be dead."[2]

1. Mayo, William J.: The Surgical Treatment of Pancreatitis. Collected Papers, The Mayo Clinic, 1905-1909.
2. Moynihan, Berkeley: Brit. Med. Jour., July 26, 1913.

REPORT OF CASE

Patient.—Man, aged 22, American, a soldier of the Hospital Corps, U. S. Army, admitted to hospital Aug. 27, 1913. He gave no history of any previous illness except typhoid fever at the age of 9. Denied venereal infection of any kind.

Present Illness.—About a week before admission to the hospital, he noticed the appearance of jaundice, coincidently with "indigestion," poor appetite, irregularity of the bowels, feeling of weakness. He was conscious of a slight pain, or rather a feeling of discomfort in the epigastrium, but no tenderness was apparent in that region. There was no history of trauma. Physical examination showed nothing of any importance except rather marked icterus, no tumor was palpable in the region of the gall-bladder. The urine was negative except for the manifest presence of bile. Stools were white, greasy and offensive. The case was diagnosed and treated as acute catarrhal jaundice. Considerable improvement followed and the patient was returned to duty Aug. 31, 1913, but remained under observation. During the next couple of weeks he still complained of occasional attacks of nausea, the appetite again became poor, the feeling of epigastric discomfort returned and the icterus, which had never entirely disappeared, began to deepen until it was more marked than ever. Sept. 14, 1913, he was again admitted to the hospital. Distention of the gall-bladder could now be recognized by percussion, he complained of intense itching of the skin which kept him awake at night, very poor appetite, acid eructations and nausea after meals, a feeling of great weakness and prostration. The stools showed no tinge of bile.

First Operation.—The patient was operated on Sept. 18, 1913. The gall-bladder was found greatly distended, the head of the pancreas was distinctly enlarged and hard, but not nodular. A single lymph-gland was palpable in the fissure of the liver. The gall-bladder contained a large amount of very dark, thick bile (about 4 ounces were removed by aspiration). When the gall-bladder was opened, the mucous membrane was found normal. Examination of the duct showed nothing to account for the obstruction except the pancreatic enlargement. The gall-bladder was stitched in the wound and biliary drainage established.

Great relief followed this operation, but the results were on the whole disappointing. The jaundice did not disappear, though it was greatly diminished. The appearance of the stools did not change. The bodily nutrition did not improve, though it was fairly well sustained. The patient became very restless and chafed at the confinement to bed. The biliary fistula became extremely annoying to him, and when the operation of cholecystenterostomy was suggested and explained he eagerly requested to have it done, declaring that he would do anything to get rid of the fistula.

Second Operation.—Oct. 18, 1913, I again opened the abdomen, freed the gall-bladder from the abdominal wall and anastomosed it to the jejunum behind the transverse colon by means of a small Murphy button. The head of the pancreas was found to have increased greatly in size since the preceding operation, the body of the gland was also enlarged, and, although there did not seem to be any further involvement of the lymph-glands, the suspicion of a malignant tumor became a practical certainty. The patient made a good recovery from the operation, the wound healed readily, and the stools became dark with bile, but he had frequent attacks of pain and vomiting. Emaciation became more marked; the condition gradually became one of cachexia. The patient was transferred to the Base Hospital at San Antonio, Tex., Nov. 25, 1913, where he died December 16, following.

Necropsy.—From an excellent report of the necropsy, furnished me by Captain C. L. Cole, Medical Corps, U. S. Army, I extract the following:

Left lobe of the liver found markedly enlarged, extending to the level of the costochondral junction of the seventh

rib and on the left side to within 1 inch of the thorasic wall. Marked adhesions throughout. Numerous nodules over the anterior surface from which on opening a greenish-yellow pus exudes. Marked adhesions throughout the hypochondrium. Intestines grayish in color with marked enlargement of all mesenteric glands.

Capsule of spleen adherent to its bed.

Large mass involving lower border of liver in the region of the gall-bladder, entirely surrounding the duodenum, involving the head of the pancreas and extending one-half its length to the tail. Tumor attached to the liver enclosing the remains of the gall-bladder.

When sectioned, the tumor has a lemon-yellow color throughout. That portion involving the head of the pancreas shows connective tissue bundles enclosing numerous islands giving very much the appearance of fatty tissue, is firm in consistence. While that portion of the tumor attached to the under surface of the liver appears to be composed entirely of connective tissue with whorls of tissue lighter in color enclosed, this portion of the tumor is less firm in consistence than that portion involving the pancreas.

Section of Liver and Tumor: A distinct line of demarcation exists at the line of junction of tumor with surface of the liver with very slight tendency of tumor cells to invade the liver. At a few points, while the capsule of the liver shows no marked invasion, there are areas just within the capsule of the liver which show some invasion and the capsule at these points is thinner than at others. There is some invasion, however, of the capsule of the liver. The blood-vessels of the tumor, of sufficient size to be readily distinguished, possess distinct thick walls while the smaller vessels possess an endothelial lining. The tumor contains fat.

Section of Tumor Involving Pancreas: The arrangement of the cellular group shows some remains of the glandular tissue of the pancreas with very little connective tissue and these surrounded by round cells showing mitotic figures. Blood-vessels show distinct endothelial lining. Section contains fat, as shown by special technic for the demonstration of that substance; no intercellular substance.

The micro-organism isolated from the abscess of the liver is one of the colon group and evidently formed abscesses subsequently to the occlusion of the bile passages by the tumor growth. The Cammidge reaction was negative prior to the death of this patient.

The condition is primary carcinoma of the pancreas, involving at the time of death, the duodenum, gall-bladder and attached to the under surface of the liver. Secondary multiple abscess formation in the liver, nephritis, degeneration of the splenic tissue.

It is worthy of remark that sugar was not found in the urine of this patient at any time. In view of the history of typhoid in early life, the bile was examined for typhoid bacilli and found negative for this organism.

Our increased knowledge of interstitial pancreatitis gives a chance for a hopeful prognosis in many cases, where formerly the clinical picture would have been regarded as conclusive evidence of a fatal condition. When in such cases operation revealed an enlarged pancreas with obstruction of the common duct and distended gall-bladder containing no calculi, the patient was unhesitatingly pronounced to be beyond the aid of surgery. To-day, however, we are not justified in any such gloomy prognosis, unless there is further and undoubted evidence of malignant disease. On the other hand, cases like the one here reported teach us not to be too confident, even when the evidence is strongly in favor of a benign condition. The extreme youth of this patient would of itself be a strong argument against a diagnosis of carcinoma, yet the necropsy findings leave no doubt that he died of carcinoma originating in the pancreas.

PERIMYOSITIS CREPITANS

REPORT OF A CASE

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A case of perimyositis crepitans came under our observation in Cornell University Medical College Dispensary. On investigation of the literature, the disease was found to be quite rare, as only three cases have been reported.

The first case, which was reported by Günther,[1] was that of a woman, aged 60, with crepitation in the left rectus muscle of the femur, the cause of which was unknown.

The second case was reported by Pauzat.[2] The case cited here was in the three anterior extensor muscles of the leg in a soldier after a long march. Pauzat gives the pathology as an inflammation of the subaponeurotic cell-layer of these muscles with a fibrinous exudate and then crepitus.

The third case was reported by Bräuer.[3] A man, aged 39, received a fracture of both malleoli of the left leg in 1899. After treatment by many doctors for three years because of pain and crepitation in various muscles of both legs, in April, 1902, he came under Bräuer's observation, and on examination, marked crepitus was found over the hamstring muscles of the right thigh, the extensor muscles of the right leg and also crepitus in the muscles of the left leg and thigh, although less marked than on the right side. There were no swellings over the muscles, but there was tenderness on palpation; there was no muscular atrophy. Roentgenoscopy gave a negative result.

Bräuer gives the pathology as an inflammatory process which leads to a deposit of fibrin between the aponeurosis and the muscle, the symptoms of which are crepitation when the muscle is put into action; also a sensation of pain on movement. A report of our case follows:

REPORT OF CASE

E. H., aged 22, a second-year medical student at Cornell, came into the dispensary in order to ascertain the cause of the creaking which he had in different muscles of his body. The family history had no bearing on the case. The patient had had the usual diseases of childhood. There was no venereal history. For the past several years he had done a great deal of concert piano playing which caused him a great deal of physical as well as mental strain. For the past six months he had felt a crepitation in the muscles of the back over the left scapular and vertebral regions, and also in the neighborhood of various joints. This pain did not occur unless the muscles were put on a stretch. Pain occurred only on overexertion. The pain as described by the patient was of a dull aching character, such as occurs in the arm on throwing a baseball when not accustomed to it. He complained of no headache; he was troubled with slight constipation. He gave no history of external violence.

Examination revealed a young man of very good physical build and no appearance of being ill. The lungs and heart were normal. There were no enlargements of the lymph-nodes. On inspection no evidence was found of abnormality as would occur after external violence, nor were there any

1. Günther: Die hörbaren Erscheinungen der Gelenke im gesunden und kranken Zustande, 1854, Düren, Verlag Gislason.
2. Pauzat: In Dams Händbuch der Militärkrankheiten, Äussere Krankheiten, Leipsic, 1896, Besold, p. 72.
3. Bräuer: Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1902, x, 758.

signs of inflammation, as redness, heat and swelling. The part was not painful to touch nor was there any loss of function. On placing the hand over the scapular muscles and having the patient put the muscles on a stretch and move them there was marked crepitus felt and a creaking was heard. The muscles along the vertebral column were affected in the same manner, as were also the muscles over the ankle- and wrist-joints.

Roentgenoscopy revealed no calcification of the muscles or any abnormality in the joints or bursae surrounding the joints. The clinical pathologic findings were: blood normal, Wassermann negative, urine normal.

A piece of muscle was removed from the left scapular region where the crepitus was most marked. The specimen was examined in the pathologic department of Cornell University Medical College. The findings were localized thickenings in the aponeurosis and muscle which had been caused by hyaline swellings.

This case seems to be the only one in which there has been any pathologic and microscopic examination of the lesion.

CONCLUSION

The cause of this lesion is overexertion, resulting in small areas of rupture in the muscle and the aponeurosis, which are followed by minute hemorrhages and then hyaline thickenings. These thickenings cause a creaking when the two surfaces rub together. If there is any fibrin present it is absorbed very early.

316 West Ninety-Fifth Street.

OPHTHALMOPLEGIC MIGRAINE

WITH REPORT OF A CASE OF RECURRENT PARALYSIS OF THE RIGHT EXTERNAL RECTUS MUSCLE FOLLOWING PARTURITION

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Ophthalmoplegic migraine is a well-defined condition, and has been observed by many clinicians. Usually the muscles innervated by the oculomotor nerve are involved. Paralysis of the abducens is rather rare, although some cases have been reported in the literature. Pregnancy or parturition as a primary or contributory cause has as yet not been considered. The case I am here reporting therefore is of considerable interest from the point of view of rarity, as well as from that of etiology, as it strongly points to a toxemia as the exciting cause. I could find no similar case reported in ophthalmic literature.

Mrs. S. M., aged 35, came to the Lebanon Hospital Sept. 12, 1913, complaining of dizziness and double vision, as well as pain in the eyes. The following history was obtained: She had had the usual diseases of childhood, without other serious ailment, but had suffered occasionally from headache. The present history dates back five years, when after giving birth to her first child she suffered from a severe attack of headache confined to the right side of the head, which lasted for about two weeks. She also suffered from multiple recurrent abscesses of the eyelids. She did not vomit but was nauseated. When the headache began to subside she became dizzy and began to see double. She also noticed that she could not move the eye to the right, but had to turn her head. This lasted for about six weeks, when the diplopia disappeared and she felt well again. The multiple recurrent hordeola also disappeared simultaneously with the cessation of the migrainous condition.

The patient was free from any migrainous attack until the next childbirth, which came a year later. Following the second childbirth she again suffered from a severe attack of hemicrania confined to the right side, accompanied by multiple recurrent sties which lasted for about four weeks. She did not see double and had no vertigo, but remembers of having been annoyed by various flashes of light (scintillating scotomas). She was again free from migraine until she gave birth to the third child one year later. Again she suffered from severe hemicrania and the recurrent annoying and painful sties, which lasted several weeks. There was no diplopia. She was practically well except for some slight occasional headache until her last child was born.

Three weeks before I saw the patient, she gave birth to a healthy baby. All the previous children are living and in good health. Delivery was easy and normal. A few days after delivery she developed a severe headache confined to the right side. The pain was continuous and was not much relieved by medication. Simultaneously with the onset of the headache there appeared numerous sties on both upper and lower lids of both eyes. The patient was nauseated but did not vomit. The headache lasted for about three weeks. When it finally stopped she began to feel dizzy; vertigo and double vision prompted her to consult me.

On examination I found that the upper and lower lids of both eyes were swollen and inflamed as a result of numerous hordeola. The lids on account of the swelling were drooping and could be elevated only with difficulty. Corneas and pupils were normal. The right eye failed to move toward the right side beyond the median line. Diplopia was present. Images were farther apart when looking toward the right, but were of equal height. Ophthalmoscopic examination showed a normal eyeground.

The diagnosis was made of paralysis of the right abducens, probably migrainous in character. I applied treatment only to combat the local inflammation. Hot fomentations consisting of the following mixture were given:

	Gm. or c.c.	
Tincturae arnicae	20	ʒss
Liquoris plumbi subacetatis diluti	20	ʒss
Tincturae opii	10	ʒii
Aquae camphorae	20	ʒss
Aquae destillatae q. s. ad	100	ʒiii

September 18, the swelling was practically gone although there were evidences of the formation of new sties. Diplopia was still present, but the muscle moved much more beyond the median line. A tonic of iron and arsenic was given.

September 25 the external rectus moved much more freely; there was no manifest diplopia, but double images could be elicited by a red glass. The dizziness persisted except when the paralyzed eye was bandaged.

October 2, there were several sties on the lids; there was no diplopia, but dizziness persisted. Examination of the nose and throat revealed nothing abnormal excepting a slight catarrhal condition of the nasopharynx.

October 12, the patient was free from sties. There was no diplopia or dizziness; she felt perfectly well and was discharged. Her error of refraction was a low degree of hyperopia which had no bearing on the case.

Urinary examination was negative. No Wassermann test was made, but from the clinical aspect she was free from syphilis. There were no hysteric stigmata present. The diagnosis of ophthalmoplegic migraine is the only rational conclusion.

It is of considerable interest to note that this patient suffered only after giving birth to a child. She had two attacks of ophthalmoplegic migraine at an interval of four years, and two successive attacks of ophthalmic migraine. Each of these attacks was associated with recurrent abscess formation. I believe it highly possible that some toxemia of pregnancy is responsible for the condition in this case.

917 Spruce Street.

Service.—When we try to serve the world (or to understand it), we touch what is divine. We get our dignity, our courage, our joy in work because of the greatness of the far-off end always in sight, always attainable, never at any moment attained. Service is one of the ways by which a tiny insect like one of us can get a purchase on the whole universe. If we find the job where we can be of use, we are hitched to the star of the world, and move with it.—Cabot: What Men Live By.

Therapeutics

THE TUBERCULOSIS PROBLEM

The medical profession is confronted by the difficulty of determining how it can best modify the universal exaggerated fear of contracting tuberculosis from infected persons, and at the same time continue to obtain very necessary financial, legislative, municipal and personal aid in the cure, prevention and ultimate eradication of this most frequent cause of death.

It is never amiss briefly to recapitulate the data that make the problem of staying this disease so difficult. Hippocrates (460 to 377 B. C.) described consumption and stated that it was most difficult to cure, and was the most fatal disease. Galen, Avicenna and later Boerhaave and Morgagni, all recognized its communicability. In the middle ages, in 1550, Montano described tuberculosis to be a most dangerously contagious and easily contracted disease. It was so prevalent in European cities that in the seventeenth and eighteenth centuries active steps were taken to stay it, and in Naples a royal decree, dated Sept. 27, 1782, ordered the isolation of consumptives and disinfection of their apartments, personal effects, furniture, books, etc., by means of vinegar, brandy, lemon-juice, sea-water or fumigation. Any person violating this law was severely punished.

In round numbers, as estimated a few years ago, the civilized world loses by death from tuberculosis about 1,100,000 individuals annually, or 3,000 a day, or 2 every minute. The United States annually loses about 150,000 from this disease. It has been estimated that about one-third of civilized mankind are either actively tuberculous or harbor a latent tuberculosis in some organ or gland.

Under the general title of tuberculosis are included the various pulmonary forms, abdominal forms, tuberculosis of the bones, glands and other organs of the body. This is a disease of civilization and hence due to the congregation and crowding of mankind into small regions, as cities. Thousands of persons suffering from pulmonary tuberculosis are walking our streets and expectorating billions of tubercle bacilli daily.

The United States has a population of nearly 90,000,000 people; of these nearly 12,000,000 will die of tuberculosis in some form, and the majority of the latter number with pulmonary tuberculosis. The death-rate from this disease among the colored race is nearly twice that in the white. Or, put in another way, about one in every ten deaths of the white population and about one in every six deaths of the colored race is from tuberculosis.

A few years ago statistics showed that, in Europe, France, Austria and Russia led the death-rate from this disease; Switzerland, Belgium, Denmark, Norway and England did not suffer so extensively; while the death-rate in Germany held the intermediate ground.

A short time ago tuberculosis headed the death-list of ten principal cities of the United States. Now pneumonia has reached first place in some of these cities. In many cities the number of deaths from tuberculosis is much greater than that from all combined diseases that are called infectious, with the exception of pneumonia. To be exact, in 1907, the death-rate from tuberculosis per hundred thousand in the registration area of the United States was 183.6. This is a decrease from the year 1900, while still later statistics show a slight decline, because of a better understanding of the disease and better methods of treatment. Statistics[1] compiled by Frederick L. Hoffmann, on the basis that ten living persons have the disease to every death from it, indicate that there are probably 1,500,000 tuberculous patients in the United States.

PREVENTION

This being the problem, what has been accomplished in the few years since the medical and lay world have cooperated in preventive measures? Every large city, as well as every state, has shown a decrease in deaths from tuberculosis during the last decade. In some cities the lessened death-rate from the disease in wards or sections graphically and conclusively demonstrates what can be done by way of prevention. It has been estimated that in the last ten years about 200,000 less deaths from tuberculosis occurred in the United States than would have been estimated from the death-rate of the previous decade.

Hoffmann finds that the death-rate has diminished from 389.1 per hundred thousand of population in 1881 to 180.1 in 1912; that from 1881 to the present time the death-rate from tuberculosis in some states has been reduced nearly one-half, and also—an exceedingly interesting fact—that the fall in the death-rate of women in several eastern states has decreased more than that of men. This must show that the hygienic conditions of factories have not been improved so much as the hygiene of houses and tenements. On the other hand, the death-rate, from all causes, of women and girls in some cotton-mills is shown to be much greater than that of the men and boys employed there. Germany is probably now leading the world in advanced sanitation of factories and in the inducements offered to factory employees to take the sanatorium cure.

Hoffmann further states that the annual mortality from tuberculosis is now about 125,000, and the dreaded cancer causes about 75,000 deaths annually in the United States. All this goes to show that preventive medicine has continuous and progressive problems; as fewer babies and young children die of preventable diseases, including tuberculosis, more are dying from pneumonia, cancer and (early in the decades between 40 and 60) of cardiovascular-renal disease.

Hoffmann finds that the average age of death from tuberculosis of the lungs is 36 years, which emphasizes the facts that since consumption was first known, even back in the time of Hippocrates, young adults from 20 to 30 are the most susceptible to the disease, and that the greatest number of deaths occur between the ages of 15 and 40.

There can be no question that the lessened death-rate from tuberculosis is due to sanatoriums, isolation hospitals, out-door treatment, fresh air in sleeping-apartments, improved tenement-house laws and a better understanding by the public of what predisposes to the disease. As most deaths from tuberculosis occur in cities, the splendid work of municipal boards of health has been the principal cause of the decrease of this disease. Even the introduction of closed sewers as a factor in reducing tuberculosis should not be overlooked, says Irving Fisher,[2] in his national report. Also, the enormous value of certified, or at least pasteurized, milk in preventing tuberculosis among children should be repeatedly chronicled. As Nathan Straus and his able

1. Presented at the Ninth Annual Meeting of the National Association for the Study and Prevention of Tuberculosis, Washington, D. C., May 9, 1913.
2. Fisher, Irving: Bull. of the Committee of One Hundred, No. 30, July, 1909.

laboratory corps have shown, milk which has been both certified and properly pasteurized is still better.

Open-air schools are active agents in preventing tuberculosis through the improvement in children who have a tuberculous taint and the better nutrition of debilitated and anemic children. The value of such schools in the prevention of tuberculosis should be universally known.

MEASURES THAT WILL CAUSE FURTHER DECREASE IN THIS DISEASE

These may be enumerated as, primarily:

1. General instruction in hygiene and in the conditions that predispose to this disease.
2. Tenement-house laws to prevent overcrowding.
3. Sunlight.
4. Open windows, verandas and roof-gardens.
5. Municipal breathing-spaces; parks, playgrounds, etc.
6. Proper ventilation of all churches, theaters, halls and assembly rooms.
7. Open-air schools, or open-window schools.
8. Laws prohibiting spitting on the streets and in buildings.
9. Better factory sanitation; better methods of cleaning public buildings and public conveyances.
10. Special laws against the dissemination of dust in factories, foundries and all occupations in which it may be inhaled.
11. Better hygiene and improved buildings for all general hospitals, prisons and jails.
12. Better laws for the more scientific control of tuberculous cattle, and compulsory cleaning and improving of all cow-barns and farms used for producing public milk-supplies.
13. Certification or pasteurization of all milk used for infant-feeding.

Personal preventive measures are:

1. Compulsory report of every case of tuberculosis.
2. Careful instruction of the family in the care of the tuberculous person, if he is to remain at home.
3. Careful personal instruction of the patient, if he is at an age to receive it, as to the possible methods of communicating the disease to others.
4. Sanatoriums for incipient cases of pulmonary tuberculosis.
5. Isolation hospitals for advanced tuberculosis patients whose home surroundings are inadequate.
6. Skilled dispensary care of ambulatory cases and visiting nurses for "follow-up" work.
7. Sanatoriums or rest-hospitals for joint and bone tuberculosis; these are of special value when located at the seaside. (The value in glandular tuberculosis of seaside sanatorium or veranda rest-cures should also be recognized.)
8. Careful instruction to reduce the morbid fear of other members of the family, and for the mental comfort and happiness of the patient. This should be given, both by the board of health and by the attending physician, to the effect that the disease is not contagious, and that if the instructions urged are properly carried out the probability of acquiring the disease from the patient is practically nil.

COMMUNICABILITY

We avoid the term "contagion" because it has caused such wide-spread, needless fear. Even the word "communicable" must be either modified or more carefully explained than it has been heretofore. We must now give more thorough instruction concerning the causes that predispose to the development and growth of the tubercle bacillus, which so frequently has long been resident in the patient himself and has not been acquired recently from any associate. The fact that there is a specific germ, which is often contained in the sputum and can be sprayed by careless coughing (it is estimated that a bad case of pulmonary tuberculosis can distribute seven billions of tubercle bacilli in twenty-four hours), has completely obscured the fact that such sputum in the vast majority of cases communicates the disease only to the young child playing on the floor in rooms occupied by a careless tuberculous patient.

Although there is no doubt that a house or building may frequently become infected, still the associates and attendants of a tuberculous patient do not frequently acquire the disease from him, and hence the phthisiophobia that is so rampant should be corrected for the sake of humanity and civilization. The sufferers from a disease that is so universal, latent perhaps in nearly one-third and perhaps active in nearly one-tenth of civilized mankind, must not be treated harshly by the nine-tenths of the people who are well. The persistent freedom from the disease shown by physicians and nurses who care for tuberculous patients in hospitals, the diminution of the tuberculosis death-rate in villages in which such hospitals are located, the infrequency with which a married man or woman acquires the disease from a wife or husband who suffers from it — all these facts, shown by statistics, prove that the disease cannot be termed contagious, and that its communication is, under ordinary sanitary conditions, not probable.

There is no longer a necessity, then, for the medical profession to emphasize the rôle of the tubercle bacillus; what should be emphasized and taught is the proper care of young children, and the fact that most tuberculosis has been acquired in childhood and only develops in the individual himself later. Laymen should understand the various causes for such a lighting up, or development, of a latent tuberculosis. They should also be told that at least a third of all individuals in civilized communities, by the time they have reached adult life, have acquired and more or less successfully combated the germ of tuberculosis. Some able investigators even state that most adults have received some tuberculous infection.[3] After the public understands this and realizes that the majority of these persons are well and apparently non-tuberculous, it is then ready to be taught that the real danger of the development of tuberculosis lies in anemic and run-down conditions; in uncured influenza, bronchitis, pneumonia and pleurisy; in the irritation of inactive tuberculous foci by acute infections, as measles and whooping-cough; and in the debility that follows incomplete restoration to health after all acute infections. Such teaching will not only prevent phthisiophobia, but will also be a very great factor in preventing the development of tuberculosis.

On the other hand, statistics certainly show the danger of direct contagion in children, as it has been found that the mortality of children from tuberculosis is in inverse proportion to the length of time between their birth and the death of their infected parents, and in direct proportion to their nearness to the contagion. Thus, if they are removed from their infected parents, or from persons afflicted with the disease, they have more chance of recovery than if they remain in contact with such infection.

(To be continued)

3. Baldwin, E. R.: Bull. Johns Hopkins Hosp., 1913, xxiv, 229.

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SATURDAY, MARCH 14, 1914

AN EXPERIMENT WITH TUBERCULOSIS

The problems presented by the wide-spread existence of tuberculosis in dairy cattle are manifold. They bear on human experience in connection with the hygiene of the milk-supply, which is assuredly a matter of no small concern to all classes of society. The question of tuberculosis in cattle involves the economics of agriculture to a far greater degree than the uninitiated can appreciate; for the disease has manifested itself so very widely that the hope of complete eradication must be deferred for a long time, to say the least. Furthermore, the outcome of the management of tuberculous herds may point the way for advantageous applications in the field of human treatment or prophylaxis; so that there are lessons to be learned from work now being undertaken in many parts of the world.

We have no desire to rehearse at this time the debate as to the identity or diversity of human and bovine tuberculosis. In view of the important relation of cattle to man, it is significant that, from the point of view of public health, tuberculosis is probably the most notable and also the most prevalent disease of cows. For example, an expert in the government service, Dr. John R. Mohler, estimated a few years ago that probably 25 per cent. of all the cows which supply milk to the District of Columbia were tuberculous.

In view of the enormous practical difficulties in the way of the complete eradication of tuberculosis in cattle by the wholesale slaughter of all animals known to be infected with tuberculosis, schemes for utilizing the latter have been devised. The most prominent of these is the system whereby tuberculous cows are isolated and used for breeding purposes, the calves being removed from the mothers at the earliest moment and brought up without further exposure to the disease. This has been rendered possible by the finding that such young are regularly born in perfect health, and entirely free from tuberculosis. The affected breeding cattle in this way do not become an entire economic loss. A ten-year investigation, carefully verified and supervised by government officials, has just been reported by Brooks[1] in connection with what is probably one of the most valuable herds of Holstein-Friesian cattle in the world.

The object of the experiment, some of the incidents of which deserve to be quoted in considerable detail, has been to produce a herd of Holstein cattle entirely free from tuberculous taint and yet endowed with all the most valuable strain-characteristics possessed by this widely advertised breed of stock. Animals were selected because of their desirability from the standpoint of breeders and milkers or because of their "type," and entirely independent of the presence or absence of tuberculosis. The tuberculous animals greatly outnumbered the non-tuberculous and in most instances several generations of tuberculosis on both sides are known to have existed. Three hundred tuberculous animals were studied. The existence of tuberculosis was determined by the administration of treble the official dose of tuberculin, repeated in non-reacting animals three times at intervals of six months. All animals reacting to either test were removed at once to the tuberculous farm, the administration of which is entirely separate from that of the non-reacting herd. Little or no possibility of the transmission of infection from the tuberculous group to the healthy one exists.

In the management of this tuberculous herd, with few exceptions, tuberculous cows are bred to tuberculous bulls; the selection in any case is made for purposes of "type," and no account of the infection is taken so far as breeding is concerned. At birth the calves are immediately taken from the mother and no possible communication thenceforth exists between them, except that the calf is given by bottle one feeding of the first milk-secretion of the mother, removed by stripping and fed unsterilized. All subsequent feedings are made from a modified-milk formula, based on pasteurized milk collected indiscriminately from sound and tuberculous animals. The feedings are made directly after pasteurization and before the milk has been cooled; pasteurization is begun immediately after the milk has been collected and before it has lost its natural heat.

Of more than two hundred calves born of the tuberculous herd, not one has become tuberculous, although all have been tested three times by massive doses of tuberculin. Some evidence exists tending to indicate that these animals are rather more resistant to tuberculosis than animals born of non-tuberculous parents. No falling off in type, in milk production or fertility is present in these calves, no increase in death-rate exists among them as compared with the offspring of healthy cattle, no falling off in value takes place, and several of the most valuable cows and bulls in the world are of this ancestry. These facts remain constant even where at least three generations of known tuberculous parentage exist.

No tuberculous animals showing gross evidence of disease are kept; but so far as the other reactors are concerned, practically all the world-records as to fer-

1. Brooks, H.: An Experimental Study of Heredity in Bovine Tuberculosis, Proc. Soc. Exper. Biol. and Med., 1914, xi, 50.

tility, milk and cream production are held by animals either themselves thus infected or the offspring of tuberculous ancestry. The world's record of milk production was made by a 7-year-old cow of this tuberculous group (Wooderest Meta Vernon), herself also the descendant of three known tuberculous generations. This cow gave in 365 consecutive days a total of 28,436 pounds of milk, and during her five years of fecundity has given birth to five high-grade and perfect calves. A 23-month-old heifer of this group, sired and dammed by tuberculous animals, has beaten the world's record of milk production for this age by 4,000 pounds.

The lessons of this most interesting experiment, with an outcome that must be a matter of surprise to many who have looked on the bovine tuberculosis situation as almost hopeless, are such as to give food for reflection. Numerous suggestions of moment are self-evident, and a new outlook has been opened.

THE ETIOLOGY OF EPIDEMIC SEPTIC SORE THROAT

Three extensive outbreaks of septic sore throat in the past three years, in Boston, Chicago and Baltimore, respectively, have, more forcibly than anything else, directed attention to the epidemiology of the disease and occasioned a consideration of its relation to the public health. The facts in regard to these and similar epidemics have received detailed mention from time to time in THE JOURNAL,[1] and some of the statistical and laboratory data, such as the studies of Miller and Capps[2] and of Davis,[3] for example, have been presented. The relationship of the disease to the milk-supply has for some time been either suspected or confirmed. There has been a tendency, in the investigation of a number of epidemics, to conclude that the cause of the infection in septic sore throat is the streptococcus which is discharged from the inflamed udder of the dairy cow into the milk, through which it is transferred to the throats of milk-consumers.

The evidence for the foregoing theory of infection has hitherto been circumstantial rather than positive and direct. The outbreak of epidemic septic sore throat at Cortland and Homer in the state of New York, during April of last year, gave an opportunity to demonstrate the correctness of the commonly held view.[4] The incidence of the cases in this outbreak soon cast suspicion on the milk-supply from one dairy. Over 70 per cent. of the cases in each community occurred among the patrons of a dairyman who was the only dealer selling milk in both places, and who furnished less than 7 per cent. of the total milk-supply. Adjacent towns had no cases, and, further, they received no milk from the suspected dairy.

As the result of an inspection of the cattle belonging to this dairy, two cows which showed physical signs of udder inflamation were isolated from the main herd and the use of their milk was forbidden. For the first time in the history of the investigation of individual cows for the existence of udder inflammation, we are told, a centrifugal milk-clarifier was used. By means of this apparatus the milk of all animals in the herd involved was examined and the sediment easily secured. The quantitative results in the case of the two suspected animals alone furnished sufficient evidence, by contrast with the milk sediment of the rest of the herd, to point conclusively to their udders as affected; and the microscopic examinations showing the streptococci, bacilli and phagocyting white corpuscles discharged by the inflamed organ into the milk completed the proof.

Bacteriologic examination demonstrated that cultures from the throats of four patients contained streptococci apparently identical with strains of streptococci obtained from milk slime from the two cows suffering from garget. Cultures from the throats of eight other patients contained slightly varying streptococci of the same type. These organisms were further found to correspond to strains of streptococci previously isolated from cows of another herd known to be suffering from garget, and from the milk slime of a cow supposed to be normal but giving an abnormal amount of sediment.

Inasmuch as it is now generally held that the streptococcus is the chief etiologic factor in septic sore throat, the predominance of organisms of that type in the inflamed udders of garget cows has drawn attention to their possible significance, and has suggested the probable original source of the infection in man. We must not forget the possibility, however, that in addition to the primary infection of milk, pathogenic organisms may be accidentally introduced into it through its being handled by persons suffering from streptococcic infection.

1. The Source of the Streptococci in Epidemic Sore Throat, editorial, THE JOURNAL A. M. A., Jan. 4, 1914, p. 51. Capps, Joseph A.: Epidemic Streptococcus Sore Throat—Its Symptoms, Origin and Transmission, ibid., Sept. 6, 1913, p. 723.

2. Miller, J. L., and Capps, J. A.: Epidemic Sore Throat Due to Milk, THE JOURNAL A. M. A., April 13, 1912, p. 1111; The Chicago Epidemic of Streptococcus Sore Throat and Its Relation to the Milk-Supply, ibid., June 15, 1912, p. 1848.

3. Davis, D. J., and Rosenow, E. C.: An Epidemic of Sore Throat Due to a Peculiar Streptococcus, THE JOURNAL A. M. A., March 16, 1912, p. 773. Davis, D. J.: Bacteriologic Study of Streptococcus in Milk in Relation to Epidemic Sore Throat, ibid., June 15, 1912, p. 1852.

4. See North, C. E.; White, B., and Avery, O. T.: A Septic Sore Throat Epidemic in Cortland and Homer, N. Y., Jour. Infect. Dis., 1914, xiv, 124.

A NEW DEPARTURE IN CLINICAL TEACHING

A few months ago[1] we announced a gift of $1,500,000 from the General Education Board to the Medical Department of Johns Hopkins University to endow clinical teaching. Word now comes that $750,000 from the same source has been given to the Medical Department of Washington University for a like purpose. Thus provision has been made for a practical trial of

1. Full-Time, Salaried Clinical Professors, Current Comment, THE JOURNAL A. M. A., Nov. 22, 1913, p. 1906.

the plan in two institutions. The plan provides that the heads of the departments of medicine, surgery, pediatrics and, possibly later on, other clinical branches, shall give their undivided time to teaching and research, and retain no fees for consultations. If these all-time professors act as consultants in private cases, fees for such consultations are to be turned into the university treasury. So far as we are aware, this plan has never been tried anywhere, either in this country or abroad, and the result of the experiment will be watched with interest.

That the teaching of the clinical branches must be put more nearly on the basis of the teaching of the fundamental subjects, and that full-time teachers must be assigned to these subjects, is becoming more or less generally recognized. It is believed, however, that a large number of men engaged in practice will also be needed to give part of their time to teaching and research, though the number will probably not be so large as at present. When, however, the question is raised as to the rank of the man who can be secured to give full time to the college work and receive no compensation outside of the salary, there is considerable difference of opinion. If a man of exceptional ability has worked his way to the head of a department, does he disqualify himself for the position if he declines to give up the emoluments of general practice? Will not the attempt to restrict great clinical teachers to a salary result in the medical schools being compelled to accept men of less commanding ability and power? If a great clinician is willing to give half or two-thirds of his time to research and instruction, but wishes to reserve two or three hours a day for consulting work for which he can readily secure large fees, is there any real advantage gained in compelling him to surrender these fees to the university?

An important economic problem is involved here which cannot at this time be discussed at length. It is important to say, however, that by placing the clinical chairs on a salaried basis it may become as difficult for the medical colleges to secure and retain the services of the best talent in the clinical departments as it is for our schools of technology and engineering to keep on their faculties the most skilled engineers, who are drawn away from teaching by the large emoluments offered by the commercial world. If the public service is of great value, are not the greater emoluments justifiable? Is it not the very experience these men gain in their public service which makes them so desirable on the faculties of the teaching institutions? It is an important question, therefore, whether it is best either for the public or for the college to restrict the work of these men.

It has been felt by some that it was unjust that the heads of departments in the fundamental medical sciences should receive very moderate salaries, while those in the clinical branches were able to earn much larger sums. Few would venture the opinion that the average professors of anatomy, physiology, pathology and the like are not men of as great capacity, of as notable attainments and as worthy of reward in every way as the average professors of medicine, surgery and other clinical branches. There is undoubtedly an inequity in such a condition, but here again an economic problem is involved. There are many occupations which call for great talents, but which bring small financial returns. The success and rewards for one's labor are not limited to the financial returns from that work. In spite, therefore, of the smaller incomes from some of these occupations, we still find men selecting them in preference to those producing greater financial returns. The remedy for inequity between the salaries of laboratory and clinical teachers does not lie in placing restrictions as to income about the clinical teachers, provided the work they do as teachers and investigators is entirely satisfactory. It lies rather in educating the university administrators and the state to appreciate more highly and reward more adequately the labor of teachers and investigators in any branch of learning.

A different plan, proposed by one of our leading educators, would place the principal burden of teaching in the clinical branches on the younger men, who would devote themselves for ten or fifteen years to teaching and research exclusively, at a modest but adequate and gradually increasing salary. The sum which it is proposed to pay to the clinical heads under the plan just discussed would support four or five men of this type. At the end of ten, twelve or fifteen years some of these men by reason of their exceptional opportunities would have gained the knowledge and experience which would prove their exceptional ability as teachers. The college would thereby be enabled to make the wisest choice of those to be granted professorships or to be placed at the head of the various clinical departments. For these younger men there would be a constant inducement to strive for the higher positions open to them. And whether they reached the desired goal or not, they would be prepared by a broader knowledge and experience to render a larger service to humanity as strong consulting practitioners, so that, as a rule, they could demand at once large fees, and in this way secure adequate reward for their years of service to education. They would still retain their connection with the medical schools, however, giving a large amount of their time to research and teaching, for a small compensation.

There are some who feel that the latter plan possesses many advantages: It secures the undivided time and energy of men for teaching and research in the most productive period of their lives, and it effects an ideal pension system, or rather makes unnecessary any pension system. It closely approximates the actual practice in the clinical departments of the German universities, where, as a rule, one contentedly serves an apprentice-

ship for many years at a meager salary because of the hope of a large reward in honor and financial return on attainment of a professorship, which rarely comes to a man in Germany under 45 or 50. A large part of the best research work, and by far the greater part of the teaching in the German medical schools, has always been done by the younger men of this type.

It is doubtless true, as Mr. Flexner has pointed out in his report on medical education in Europe, that the German system leaves much to be desired; but the method by which the younger men have been forced to serve long periods of apprenticeship is certainly not one of the faults of the German system.

It is to be hoped that this second plan will be put into operation in some of our American university medical schools, adequate endowment being provided for the employment of a large number of young men between the ages of 30 and 45 who will give their entire time to teaching and research during this active period of life. Such a pedagogic experiment would be one of great importance, and the results of the comparisons of the two methods after twenty or twenty-five years would be of the utmost value.

ADVERTISING BY PHYSICIANS

Following the midwinter Conference on Public Health, Legislation and Medical Education of the American Medical Association, held in Chicago, February 23 and 24, numerous news-items and editorial comments appeared in the public press regarding one of the papers presented at the Conference. The substance of the newspaper items was that the American Medical Association was considering the revision of its principles of ethics with a view to removing or modifying the restrictions placed on individual physicians as to personal advertising. Some of the reports stated that revision of the principles of ethics would be taken up at once, and that an overwhelming majority of members of the Association were in favor of such a change. So far as we know there is no intention or indication of any change in the position of the American Medical Association on this question; the reports in the newspapers were due to a misapprehension of the character of the paper in question and the intent of the writer.

The paper was an argument for a better understanding and closer cooperation between the medical profession as an organization and the newspaper publishers as a class. The author did not advocate or discuss the question of personal advertising on the part of physicians; the proposition set forth and defended in the paper and presented to the Conference was something entirely different from personal exploitation; it was a plea for closer cooperation between medical organizations and the press for the public good, and not for personal benefit. It suggested that the expert knowledge of the medical profession could be utilized by the public press in two ways: first, by the dissemination through the newspapers of scientific knowledge which would be of value to the public in preventing disease, and second, in placing at the disposal of those newspapers which desired it the expert knowledge of the medical profession in separating worthy and reputable from dishonest and disreputable institutions which might seek publicity through the newspapers.

Of these two important activities one has already been inaugurated by the American Medical Association, and the other is worthy of serious consideration. Neither of them, however, has the slightest bearing on the question of personal exploitation of physicians through newspaper advertising or by any other means. An honorable physician could not conscientiously advertise for personal business, for the same reason that the honorable minister and lawyer would not advertise. A professional man has no commodity to sell; his only assets are his scientific knowledge and his personal ability; and he who claims to possess greater knowledge or greater skill than his professional associates — whether physicians, preachers or lawyers — is an egotist, or worse, and forfeits the respect of both his professional brethren and his fellow citizens.

ARE PEPSIN AND RENNIN IDENTICAL?

Among all the various names of enzymes, or digestive ferments, which now enter into the vocabulary of the medical sciences none find application more frequently than the words pepsin and rennin. They are no novelties, even to the oldest practitioner; and they can be found in the service of the language of commerce and practical medicine alike. They have been currently pictured in the teaching of the day as initiating distinct phenomena: the rennin associated with the clotting of milk in solutions neutral or nearly so; and the pepsin effective in dissolving and digesting proteins in the presence of an acid.

The Swedish physiologic chemist Hammarsten and his followers have long emphasized the view that the digestion of protein and the rennet action are brought about by two different enzyme actions. They have succeeded by a variety of devices and procedures in preserving one of these characteristic behaviors under conditions where the other is lost or impaired; in other words, the zymologists have made attempts with more or less apparent success in supposedly separating the two enzymes from each other. Some time ago, however, the idea was advanced, in particular by Pawlow and his school, that pepsin and rennin are essentially identical. They base their conclusions primarily on the sweeping parallelism which is commonly observed between the proteolytic and the rennitic properties of the solutions containing the enzymes, and further on the great difficulty which is as a rule experienced in obtaining one of the manifestations without the possibility of the other.

These differences of view have been much discussed. It must be admitted that the unquestioned simultaneous occurrence in both the animal and the plant kingdoms of enzymes having a proteolytic and rennitic action strongly indicates, to put it mildly, an identity of both enzymes and enzyme actions, as well as the parallelism of the pepsin and rennin action. The crux of the controversy centers in the question whether or not the parallelism of phenomena is a proof of their identity. Obviously it is not. Nevertheless we believe that the evidence for the contention that the protein-digesting and the milk-curdling activities of extracts, like those of the stomach, are manifestations of one and the same agency is becoming more convincing as the known facts of these enzyme actions are being more critically reviewed. There is no difficulty to-day in looking on the clotting of milk by enzymes as a stage in the proteolysis of casein. It is now agreed that the first step in the action of rennin is a hydrolytic change resulting in a product which precipitates under appropriate conditions, thereby forming the curd. The clotting may therefore be looked on as a peculiarity of the specific protein of milk casein, rather than of the enzyme which acts on it. Certain it is that the older idea of the purposeful existence of rennin in the stomach must now be abandoned; for the proteolytic extracts of plants or animal tissues which never come into contact with milk in nature are almost invariably capable of curdling this fluid under suitable conditions.

It might seem like a purely academic discussion to decide whether the burden of further proof should be placed on those who maintain the duality (or plurality) of the enzymes, or on the growing group of investigators who defend the identity of them and in upholding this unitarian point of view likewise adopt the one of greatest simplicity.[1] Furthermore, so long as enzymes can be identified only by their actions, and the chemist is unable to prepare them in pure form or isolate them from the doubtless manifold substances which they accompany, proofs of identity will not be easy to furnish. There is, however, a practical aspect to the subject in the domain of clinical diagnosis. In certain procedures, such as the tests of gastric function, we are accustomed to search for the proteolytic enzyme of the stomach and estimate its relative abundance. If pepsin and rennin are identical and a chemical unit, it may prove far more simple to make a test of the milk-clotting power of gastric contents than to apply the somewhat more cumbersome current tests involving the solution of protein. Some clinical chemists have already adopted the obvious suggestion in routine gastric analysis. The innovation is, we believe, worthy of more detailed study.

1. We refer those who are interested in the details of the arguments to Hammersten's Text-Book of Physiological Chemistry, translated by Mandel, New York, 1911, p. 451; Fuld, E.: Zur Frage der Identität von Lab und Pepsin, Internat. Beitr. z. Path. u. Therap. d. Ernährungsstör., 1913, v, 104; von Fürth, O.: Probleme der physiologischen und pathologischen Chemie, 1913, ii, 30.

Current Comment

KEEPING ALIVE THE LOW-GRADE MEDICAL JOURNAL

The privately owned medical journal of the poorer class considers it a part of its principles of journalistic ethics to blackguard the American Medical Association and THE JOURNAL. Yet curiously enough, the Association and THE JOURNAL are largely responsible for the continued existence of these publications. Time was when the manufacturer of proprietary medicines assumed a haughty attitude toward the medical press. His advertising appropriation was distributed among medical journals only of the better class; the small journals were ignored. As the American Medical Association, through THE JOURNAL, began to make plain to the profession the inherent fraudulence of much of the proprietary medicine business, the manufacturers found their status changed. First they found the pages of THE JOURNAL of the American Medical Association closed to them; later the state journals refused to accept their advertising; then some of the higher-class independent journals no longer would tolerate them. As a result, the manufacturer of fraudulent proprietary medicines is in a position where he has to take whatever avenues of publicity he can get, and the low-grade medical journal has flourished accordingly. It is true, of course, that as the profession gradually learns the real character of this class of wares, even the most venal of medical journals will find it inadvisable to accept these advertisements. Then will the erstwhile "ethical proprietary" become openly — what it has always been secretly — a plain "patent medicine," and go frankly to the newspapers. Ultimately, of course, as the medical profession becomes fully awake to the evils of the proprietary medicine business, the fraudulent proprietary will go out of existence—and with it will go the low-grade medical journal. Is the attitude of a large portion of the medical press toward the American Medical Association to be attributed to a prophetic view taken by the publishers? The low-grade medical journal should look on THE JOURNAL'S propaganda for reform in the light of a meal-ticket—for the present.

THE ABSORPTION OF IRON FROM MINERAL WATERS

There is at present a reasonable degree of accord of opinion with respect to the behavior of compounds of iron in the body as well as the indications for their therapeutic use. The view is generally accepted that the customary mixed diet contains approximately the amount of iron necessary to cover the physiologic needs for this element occasioned by the inevitable wear and tear or natural disintegrative changes in the body-cells that require it. In certain conditions of disease, on the other hand, a deficit of iron may actually arise. As a rule, the administration of the element, in the various types of compounds in which it can be given, may serve a double purpose, namely, that of repairing the loss that perchance exists and likewise of stimulating certain

physiologic functions, notably the performance of hemopoiesis. The old debate of organic versus inorganic iron has reached a tentative settlement. It must now be admitted that both forms of iron compounds can be absorbed and satisfactorily carry out the purposes for which they are ordinarily administered. In therapy to-day they have essentially the same standing. The path of absorption leads through the upper intestine into the circulation; and the excretion of iron is accomplished into the lower bowel. The kidneys take little or no part in the latter performance. Chalybeate waters have long been employed in medicine. They contain small amounts of ferrous sulphate or carbonate and they have obtained varied recognition for therapeutic potency, depending on the hitherto changing views as to the usefulness of inorganic salts of iron. Since the availability of the latter has been clearly established it is to be expected that iron-containing waters can perform the service of medicinal compounds of iron. The fundamental fact of the retention of the iron from them has lately been demonstrated by Bickel[1] for the chalybeate waters of certain Continental springs. They were administered to animals with fistulas of the small intestine which permitted the unabsorbed portions of fluids introduced into the alimentary tract to be collected again after traversing a portion of the upper intestine. Iron-containing water was found to yield the element to the gastro-intestinal tract until the mucosa was saturated, so to speak, with it; then no more iron was taken up until a period of rest had intervened. Practical therapy may thus be assured that iron salts are absorbed from natural waters in which they occur in sufficiently dilute solution; and there is no reason for supposing that these cannot facilitate hemopoiesis and hemoglobin formation, if there is a deficiency in the iron-containing component of the blood, precisely as medicinally administered iron may. They seem to possess no advantage, however, over the latter.

1. Bickel, A.: Ueber einige physiologische Wirkungen der Quellen des Bades Pyrmont, Internat. Beitr. z. Path. u. Therap. d. Ernährungsstör., 1913, v, 88.

PUBLIC LAUNDRIES

"Cleanliness is next to godliness," and it is also a prerequisite for health. If a community recognizes a responsibility for maintaining health, it must recognize the obligation which lies on it to make provision for public decency. This is the keynote of an article printed in the series of "American City Pamphlets" by Donald B. Armstrong, superintendent of the Bureau of Public Health and Hygiene of the New York Society for Improving the Condition of the Poor. Armstrong says that many communities supply means for the cleansing of human bodies, but it is just as essential to health and decency that public facilities for clean laundry should be provided when private ones are lacking. Otherwise the tone of decency of the community is lowered. Expenditures usually understood as being for the benefit of the public health really mean as much for the promotion of public decency. Among the tenement dwellers of large American cities the facilities for washing clothes are decidedly meager, and the establishment of public laundries or wash-houses fashioned after the plan of those long in use in foreign cities is a present demand. There are about fifteen of these institutions in America, five of which are in Baltimore. Other cities which have found an urgent demand for them are Philadelphia, Buffalo and Elmira. Recently the committee of the bureau of which Armstrong is superintendent made an investigation of the necessity for wash-houses in New York, and the cost of their equipment, operation, etc. The investigation covered a population of about 400,000 in the poorer sections of New York, and it was found that from 30 to 45 per cent. of the families were without any washing facilities in the home, while no hot water except that heated in the apartment is provided in from 70 to 95 per cent. of the houses. Inquiry among 10,000 bathers at one of the municipal baths showed that the women were enthusiastically in favor of the establishment of public wash-houses, and many of the men promised to make use of such facilities. In Baltimore and Philadelphia special days are set aside for men, and there are many men who could use the facilities to advantage. Armstrong says that the educational value of the measure is important. The public wash-house finds its chief justification in the fact that it gives to the people an opportunity to appreciate the value to health and decency of being physically clean. Physical cleanliness enhances moral and spiritual tone, and leads to a demand for better housing and better household equipment, which in turn make for better health and for decency.

STYLE FOR BIBLIOGRAPHIC REFERENCES

Through a committee appointed a year ago, the associated medical press of Germany has just published a bibliographic style-book. The report suggests that the names of the most widely read weeklies be abbreviated to initials; thus, the *Münchener medizinische Wochenschrift* will be "M. m. W." This may be a welcome innovation to bibliographers and abstractors, but to those not working daily with bibliographic references the mere initials will perhaps be obscure. The report recommends that references shall specify, first, the volume, next the year, then the number of the issue, and finally the page. In writing figures, Arabic numerals are to be used exclusively, and the page number is to be preceded by the initial S. (Seite). The method, on the whole, seems somewhat clumsy in comparison with the style of the Surgeon-General's Index-Catalogue, which is followed with slight modification in THE JOURNAL. Thus, where the foreign style would be "96, 1902, No. 2, S. 50," that of the Surgeon-General's Index-Catalogue would be "1902, xevi, 50." Obviously, the differences are the use of the roman numerals in the volume, the giving of the number and the use of the letter S. preceding the page number. For conciseness, the American method is evidently superior, but the use of the roman numerals is deprecated by many who work daily with questions of bibliography. Apparently we have not yet reached in either method a final point which cannot further be improved on.

MINE SAFETY AND THE WORK OF THE BUREAU OF MINES

According to the report for the year 1913 of Director Holmes of the Bureau of Mines, during the few years since the beginning of mine-safety investigations there has been a marked increase in the general interest taken by miners, mine-owners and the general public in questions relating to mine safety, and a marked decrease in the number of fatalities and injuries notwithstanding the increase in the number of men employed in the mines. The bureau has endeavored to organize and lead in the movement for mine safety, and in addition to its investigations has disseminated a large amount of information on accident prevention. In this work it has had the cooperation of state officials as well as miners and mine-owners. The activity of the bureau has resulted in increased efforts on the part of mine laboratories and mining engineers to improve mine practice and better equip the mines with safety devices and rescue appliances. For instance, at present there are several thousand sets of rescue breathing apparatus in use, besides auxiliary equipment for fire-fighting. Rescue stations have been provided at which groups of men have been instructed in the use of apparatus and in mine-rescue work. This work is also conducted by private agencies and by the mine operators and the Red Cross; but the demands on the bureau for such instruction have not diminished. During the three years in which mine-rescue and first-aid work have been taught, 31,203 miners have been trained in the use of the necessary equipment and in methods. During 1913 over 46,000 persons (miners) visited the mine-rescue safety-cars and stations maintained by the bureau, nearly 33,000 miners attended the lectures, and more than 5,500 miners were given rescue or first-aid training.

Medical News

ILLINOIS

Personal.—Dr. Elmer L. Crouch has disposed of his interest in the Maplewood Sanitarium, Jacksonville, and will devote himself to the practice of internal medicine.——Dr. John H. Cory, Geneva, is critically ill at his home as a result of uremic poison.——Dr. Charles F. Reed, assistant superintendent of the Kankakee State Hospital, has been transferred to a similar position in the Chicago State Hospital.——Dr. Ralph T. Hinton, Elgin, assumed charge of the Peoria State Hospital, March 1. ——Dr. Henry J. Gahagan, Elgin, took charge of the Elgin State Hospital, March 1.——Dr. Eugen Cohn, assistant superintendent of the Peoria State Hospital, has been transferred to a similar position at the Kankakee State Hospital.——Dr. William T. Kirby is reported to be seriously ill in the Wesley Hospital.

Chicago

Medical Alumnae Dinner.—The annual banquet and reunion of the alumnae and former faculty members of the Northwestern University Women's Medical College was held at the Hamilton Club March 12.

Ambulance Surgeons to Have Motorcycles.—The motorcycle for ambulance surgeons will be in operation April 1. Twelve motorcycles are to be employed, each including a side car. These are to be used by ambulance physicians in responding to emergency calls.

Low Mortality.—Owing to the unusually mild winter noted in January and February, the mortality for Chicago has been reduced 7.5 per cent. During these two months there has been a marked reduction of the prevalence of disease and mortality among children. There were 275 fewer deaths from scarlet fever, 91 fewer deaths from diphtheria, 76 fewer deaths from measles. There were 237 fewer deaths among children between the ages of 1 and 5 years, and 104 fewer deaths among children from 5 to 10 years old. Another notable reduction was that of 140 deaths from pneumonia.

MAINE

Personal.—Dr. Alexander C. Hagerthy was elected mayor of Ellsworth, March 2; this is his fifth term as chief executive. ——Dr. Robert J. Wiseman was elected mayor of Lewiston, March 1.——Dr. Anna L. Wilson, recently a member of the staff of the State Hospital, Augusta, has accepted a position in Washington, D. C.

New Officers.—York County Medical Society at Biddeford: president, Dr. Joseph W. Gordon, Ogunquit; secretary, Dr. Arthur L. Jones, Old Orchard.——Androscoggin County Medical Society at Lewiston: president, Dr. John A. Donovan; secretary-treasurer, Dr. Samuel E. Sawyer, both of Lewiston (reelected).——Kennebec County Medical Association at Augusta: president, Dr. Wellington Johnson; secretary, Dr. Henry W. Miller, both of Augusta.——Cumberland County Medical Society at Portland: president, Dr. Bertrand F. Dunn; secretary, Dr. Adam P. Leighton, both of Portland.

Medical Societies Protest.—At the January meeting of the Penobscot County Medical Society, January 23, resolutions were adopted strongly condemning the treatment accorded Dr. Henry W. Miller, late superintendent of the Augusta State Hospital, by Governor Haines, and approving the stand taken in this matter by Dr. Seth C. Gordon, Portland.——At the December meeting of the Cumberland County Medical Society, a resolution was unanimously adopted declaring that the attack made on Dr. Miller of the Augusta State Hospital was unwarrantable, and deprecating any change in the management of the institution.

MARYLAND

New Officers.—Prince George's County Medical Society, January 10: president, Dr. H. B. McDonnell, College Park; secretary, Dr. Samuel M. McMillan, Riverdale.

Appointments to Sydenham.—The following appointments were made by Health Commissioner Nathan R. Gorter, Baltimore, to Sydenham Hospital for Contagious Diseases: superintendent, Dr. John F. Hogan, Baltimore, to succeed Dr. T. S. Nicholson; assistant superintendent, Dr. Walter W. Point, Jr., and state laboratory assistant, Dr. Claude Van Bibber.

Personal.—Surgeon Lunsford D. Fricks, U. S. P. H. S., spoke before the Franklin Square Medical Society on "The Rocky Mountain Spotted Fever."——Dr. Martin F. Sloan, superintendent of the Eudowood Sanatorium, has returned to Towson after three months leave of absence, which he spent at the U. S. P. H. S. Sanatorium, Fort Stanton, N. M. He was in charge of a department there for three months to administer a special form of treatment.——Dr. Howard A. Kelly, Baltimore, has returned from Europe.——Dr. Lee Cohen, Baltimore, had a narrow escape from injury, March 6, when his automobile was struck by two cars.

Small-Pox in Baltimore.—Every day brings forth several new cases of small-pox. There are now over 80 cases at quarantine, and this has necessitated the employment of additional physicians, nurses and attendants at the Quarantine Station. Several cases have occurred in the large apartment houses, both among the white and the colored. It has been found that all of the cases occur among people who were not vaccinated. Vaccination is compulsory under the laws of the state, but in spite of the efforts of the health department to have every man, woman and child vaccinated, new cases of the disease are cropping out every day. There is an ordinance pending before the city council which provides that all persons, when requested by the health wardens, must submit to an examination to determine whether they have been properly vaccinated or not.

Alien Insane a Burden.—Dr. Hugh H. Young, president of the State Lunacy Commission, and Dr. Arthur P. Herring, secretary, both of Baltimore, represented Maryland in the delegation that appeared before the United States Senate committee which has the immigration bill in charge. One of the principal things that the Maryland delegation asked for was the appointment at this port of an alienist. At the present time 10 per cent. of the insane patients cared for by this state are aliens and the greater proportion of these incompetents would not have been a burden on the state if there had been adequate examination of their mental capacity

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at the time they entered this country. When the new immigration station is completed there will be a great increase in the number of foreigners entering through this port and the number of insane on the state's hands will also increase.

MASSACHUSETTS

Personal.—Dr. Henry R. Stedman, Brookline, has been appointed a trustee of the Taunton State Hospital.——The apartments of Drs. F. M. Johnson and H. A. Souther, Boston, were seriously damaged by fire, February 25.

Fisherman's Hospital Ships Apparently Assured.—The delegation from Gloucester, which went to Washington to interest the President, the Secretary of State, and the Secretary of the Navy in the establishment of government hospital ships for the fisheries of the North Atlantic coast have returned, having received much encouragement. It is suggested that a revenue cutter be utilized for hospital purposes, which could carry two surgeons, and that this could be done with little addition to the ordinary maintenance expenses.

Cutter Lectures.—The series of Cutter Lectures on preventive medicine and hygiene, given under the terms of the will of John Clarence Cutter, which provided that the lectures shall be given in Boston, and shall be delivered free to the medical profession and the press, will be given in the amphitheater of the Harvard Medical School at 5 p. m. as follows: Dr. Charles V. Chapin, superintendent of health, Providence, R. I., March 20, on "Science and Sanitation"; March 27, "Efficiency of Public Health Measures"; April 2, "Organization of the Health Department"; April 9, "Research and Publicity"; April 16, "Nuisance Problems," and April 30, "Contagious Disease Problems"; Dr. Cressy L. Wilbur, chief statistician, Bureau of Census, Department of Commerce, Washington, D. C., will lecture on "Vital Statistics in Massachusetts and the United States," May 26.

MICHIGAN

Detroit Pediatric Society.—January 28, the Detroit Pediatric Society was organized with the following officers: president, Dr. Thomas B. Cooley; vice-president, Dr. Herbert M. Rich, and secretary-treasurer, Dr. Francis Duffield. The membership will be active, associate and honorary. The active membership will be limited to twenty and it is desired to have associate members throughout the state.

Personal.—Dr. Herman Ostrander has resigned as president of the Kalamazoo Anti-Tuberculosis Society.——Dr. Joseph W. Tomlinson, Melvin, fractured his leg recently when his horse reared and fell on him.——Dr. Edward M. Auer, Kalamazoo, and Dr. and Mrs. Frank J. Gibson and Dr. and Mrs. George E. Winter, Jackson, have sailed for Europe.——Dr. Seymour M. Cornell, Bronson, is reported to be ill at his home.

MISSOURI

Personal.—Dr. Daniel F. Bell, Marshall, who has been seriously ill, is reported to be improving.——Dr. J. Scott Snider, Kansas City, who was seriously injured in an automobile accident, February 19, is reported to be improving.——Dr. James E. Calloway, Ravanna, has retired from practice, and has started for his new home in Portland, Ore.——The house of Dr. Morgan L. Clint, Meadville, was seriously damaged by fire, February 12.

County Society Adopts Pledge.—Jackson County Medical Society recently adopted the following pledge and requested all members to sign it. All new members will be required to sign it before being admitted:

"Recognizing that Jackson County Medical Society seeks to develop, exemplify and enforce the highest traditions of our calling, I hereby pledge myself, as a condition of membership in the society, to live in strict accordance with all its principles, declarations and regulations. In particular I pledge myself to pursue the practice of our profession with thorough self-restraint and to place the welfare of my patients above all else; to advance constantly in knowledge by the study of professional literature, the instruction of eminent teachers, interchange of opinion among associates, and attendance on the important societies and clinics; to regard scrupulously the interest of my professional brothers and seek their council when in doubt of my own judgment; to render willing help to my colleagues and to give freely of my services to the needy. Moreover, I pledge myself, so far as I am able, to avoid the sins of selfishness; to shun unwarranted publicity; dishonest money-seeking and commercialism as disgraceful to our profession; to refuse utterly all secret money trades with consultants and practitioners; and, when acting as consultant, to teach the patient his financial duty to the physician and to urge the practitioner to obtain his reward from the patient openly; to make my fees commensurate with the service rendered and with the patient's rights; and to avoid discrediting my associates by taking unwarranted compensation. Finally, I pledge myself to cooperate in advancing and extending, by every lawful means within my power, the influence of the Jackson County Medical Society."

St. Louis

Open-Air School.—An open-air school to cost about $35,000 is to be erected on Grand Avenue by the Board of Education. The plans provide for shower-baths, kitchen, dressing-rooms and sleeping-porches.

Milk Bill Passed.—A new ordinance controlling the milk-supply passed the general assembly without a dissenting vote. It is said this is one of the most comprehensive bills governing milk-supply in any of the large cities. It goes into effect immediately.

Cottages to be Built at Once.—After a conference with the mayor and the hospital board, the comptroller has appropriated the necessary funds to build cottages costing $600 each, sufficient to care for forty patients, now being treated in the City Hospital.

Campaign to Raise $300,000.—Mount St. Rose Hospital has begun an active campaign for raising $300,000 by popular subscription to increase its facilities for the care of consumptives. At present the institution is unable to meet the demands made on it.

Plans for Hospital Accepted.—Plans for the $700,000 infectious disease hospital have been accepted and work on two of the buildings will begin about May 1. These two buildings will be completed early in the winter. The entire group will be composed of eight buildings.

Personal.—Dr. Sherwood Moore has gone to West Africa for an indefinite period, where he will study tropical diseases.——Dr. Lionel S. Luton and Dr. Harriet H. Stevens, accompanied by Dr. Stevens' mother, departed for a six months' stay in Europe.——Dr. Ralph W. Mills has returned from abroad.

Physical Education Association to Meet.—The therapeutic section of the American Physical Education Association will hold its annual session in St. Louis, April 1-4. The St. Louis public schools will exhibit the work of the pupils. Baroness Rose Posse, president of the Posse Normal School of Gymnastics, Boston, will be one of the speakers at the women's section.

NEW JERSEY

Hospital Stormbound.—On March 3, efforts were made to send provisions to the Municipal Tuberculosis Hospital, near Trenton, which had been stormbound and had received no food supply for twenty-four hours.

Personal.—Dr. Virgil D. Marcy, Jr., president of the Cape May city council, who has been ill from overwork, has taken a trip to the Canal Zone for recuperation.——Dr. Edward Mulvany, Jersey City, has had the middle finger of his left hand amputated on account of malignant disease due to Roentgen-ray burns.

Foods and Drugs Inspection During February.—The Division of Foods and Drugs of the State Board of Health during February examined 589 samples of food and drugs. The drugs were mostly of the condiment variety used in the household, and also some household remedies. The foods consisted chiefly of such articles as canned cherries, pickles of various kinds, sausage, oleomargarine, raisins, etc. Of the 589 samples, 501 were found to be above standard, and only 88 below. Eight suits were brought on account of sophisticated foods and drugs. Of the drugs, it is interesting to note that of 9 samples of aspirin, all were found to be below standard; of 21 samples of tincture of iodin 14 were found below standard, and of 17 samples of hydrogen peroxid 10 were found below standard.

NEW YORK

New York City

Harvey Society Lecture.—The tenth Harvey Society Lecture delivered on March 14 by Dr. W. T. Halsted, Johns Hopkins University, is on "The Significance of the Thymus Gland in Graves' Disease."

Spinal Meningitis on Steamer.—The Greek steamship *Athinai*, which arrived in this port February 28 from the Levant, had on board three cases of spinal meningitis. Since the ship has been detained in quarantine, a fourth case has developed.

Motor Ambulances for City.—Automobile ambulances are to supplant horse-drawn ambulances in all the institutions in the city under the jurisdiction of the Health Department. Orders have been given for three ambulances and others will be purchased as soon as possible.

Personal.—In celebration of the completion of twenty years of continuous service as medical officer of the New York Fire Department, Dr. William A. De Long was given a dinner in

New York by the board of medical officers. Dr. Joseph E. Smith, Brooklyn, chief medical officer, presented Dr. De Long with a gold fire-badge, studded with diamonds, and suitably inscribed.

Protest Against Milk Commission.—A protest has been sent to Governor Glynn by the New York Milk Committee against the commission appointed on January 22. The protest asserts that seven out of the eleven members represent the interests of the milk dealers and manufacturers of ice cream, and are opposed to regulations for the protection of the consumer. The New York Milk Committee claims that the attitude of the commission as shown at a meeting recently, was prejudiced. The Milk Committee has produced the detailed evidence of their reasons for complaint.

Increased Issue of Health Bulletin.—Health Commissioner Sigismund S. Goldwater announces that beginning with the present issue the Department will send its *Weekly Bulletin* to 10,000 citizens, including every physician in New York City. Hitherto only 2,000 copies were printed. A list of the names of violators of the food laws will be published providing the public with information about the practices of certain food dealers. Quarterly reports of health activities will be published and tables for each quarter will be repeated for comparison. Suggestions for the *Bulletin* will be welcomed.

Clinical Study in New York.—The Society for the Advancement of Clinical Study in New York, which was organized in 1912 and which established a Bureau of Clinical Information, is now issuing a daily bulletin of operations, which it sends each evening to all regular reporting hospitals. It recently issued a booklet containing a list of the surgical clinics in New York and Brooklyn from November, 1913, to June, 1914. Dr. Charles N. Dowd is president, and Dr. George Gray Ward, Jr., secretary-treasurer of the organization.

Disease Among Bakers.—In accordance with the law requiring the examination of bakers, the employees of the National Biscuit Company, numbering over 3,500, have recently been examined by the medical officer of the company in cooperation with the Department of Health. A remarkably small amount of disease was disclosed. The examination was made with special reference to tuberculosis. No cases of positive tuberculosis and only ten suspicious cases were found. There were only two cases of syphilis. The report was most encouraging as giving evidence of the growing appreciation by large employers of labor of the importance of systematic examination of their employees.

Work of Academy Committee.—An announcement to the Fellows of the Academy of Medicine calls attention to the work of the Committee on Public Health, Hospitals and Budget which investigates matters on its own initiative and serves as a source of information to organizations of citizens and the departments of the city government which are concerned with the public health. As the work of this committee at times becomes very onerous and as there are many Fellows ready and willing to help in any work for which they are especially fitted, it is suggested that those Fellows who are willing to be called on by the committee to take up matters on request as the need arises, should send their names to the secretary, Dr. James Alexander Miller, with an indication of the kind of public health activity with which they would wish to be associated.

OHIO

Personal.—Dr. Alvin L. Light has been appointed Commissioner of Health of Dayton.——Drs. Lewis A. Buchman, Grover C. Goudy, George F. Zinninger, J. Frank Kahler, and Clare E. Fraunfelter have been appointed by the Canton Medical Society a milk commission to supervise the distribution of milk to infants and sick persons.——Dr. Sidney McCurdy has been appointed chief surgeon of the Youngstown Sheet and Tube Company.

Antivaccination Movement.—The antivaccination movement has shown itself in various parts of the state. A hard blow was struck at this organization in Toledo, when general vaccination was brought about by the action of the local board of health, the Retail Merchants' Board and the Toledo Commercial Club. In Delphos, Dayton and many smaller cities and villages the antivaccination movement continues, and is a handicap to the prevention of small-pox and a curse to the business interests of the community. The agitation is largely based on false and malicious perversion of statistics and barefaced lies. Vaccination seems to be the exception to the rule that experience is the best teacher. The lesson of 1902-3 in Ohio seems to have been forgotten.

Internal Vaccination.—In compliance with the request of the State Board of Health students of Ohio State University were required to present evidences of recent and successful vaccination before being allowed to register. It developed that in some cases the so-called "internal" method had been used. The production of an immunity by feeding is a practical impossibility, and one would expect physicians of this day and age to recognize the futility of such a procedure. One could hardly suggest that the question of profit enters into the question. An analysis of some of the tablets used for this purpose is now being made, and an attempt will be made to prevent the repetition of such a fraud which is all too common and dangerous, in that it gives the victim a sense of false security.

Small-Pox Reports.—During January more than 850 cases of small-pox were reported to the State Board of Health. The northwestern and southeastern portions of the state have suffered the most. Factors which have operated to increase the spread are the extreme mildness of the cases, the fact that vaccination has not been generally enforced in Ohio since 1903, and the inefficiency of certain local health organizations. There have been several cases thought to have had "variola sine eruptione," and one in which only eight scattered pustules could be found. February reports do not indicate much decrease in the number of cases reported. The various local health organizations are being urged to take every precaution; and inspectors of the State Board of Health are advising with health officers of villages and townships whenever occasion demands. Only four deaths were reported in January from small-pox. This illustrates better than any description the mild nature of the disease.

Public Health Exhibit.—The Public Health Exhibit of the State Board of Health has just completed a most successful campaign at Zanesville. The attendance was large and particular interest was shown in those parts of the exhibit devoted to water-supplies. There were six lectures, each one dealing with a special phase of health work. The Muskingum County Medical Society adjourned their meeting on February 11 to attend one of the public health lectures in a body. The water-supply of Zanesville is drawn from the Muskingum River and its impurity is well illustrated by the typhoid rate, nearly the highest in the state. A desire on the part of citizens for information concerning water-supplies was plainly apparent, and it was satisfied as completely as possible by the lectures. The exhibit is now in Coshocton. The campaign of public health education is meeting with even a greater measure of success than was expected, and the exhibit and lecture course particularly have given rise to much favorable comment. Constructive criticisms and experience have caused many modifications and improvements in the exhibit, and the lectures are modified to suit the needs of each city visited. Following the campaign in each city it is planned to organize the public health forces so as to continue the work started by the exhibit.

Cincinnati

New Officers.—Cincinnati University Medical Society: president, Dr. Howard L. Schriver; secretary, Dr. Joseph M. Topmoeller.

Society Disbands.—On February 9 a meeting of the Cincinnati Medical Library Association was held, its object being to conclude the affairs of the association and to disband. The funds on hand, amounting to $293.78, were turned over to the Dandridge Memorial Library Fund of the Medical Department of the University of Cincinnati.

Opposition to New Sewer System.—Considerable opposition has been expressed with regard to the plans for the new sewer system now under construction in Cincinnati. Many feel that the Ohio River should be purified rather than undergo further contamination. The question was very thoroughly discussed at the meeting of the Medico-Civics Association, following a paper on the subject by Mr. John W. Hill, a very eminent engineer.

Management of City Hospital.—Now that the building and equipment of the new City Hospital is no longer a subject for discussion, all diversity of opinion has centered on its management or control, and numerous solutions to this complex problems are being advanced not only by members of the medical profession, but by the lay public as well. Several meetings of the Charter Commission have been held, when prominent citizens from the business, industrial, professional and political world have entered into animated discussions. The question was very thoroughly discussed at the Academy of Medicine, February 22, following a paper read by Dr. Otto P. Geier, his

subject being "The Control of Public Hospital in Relation to Welfare Work Under the New Charter." Some favored a board of control to be made up largely of city officials with a very meager representation from the medical profession. Others feel that the hospital should be more closely affiliated with the Medical School of the University of Cincinnati, serving a two-fold purpose by being of value in an educational as well as a charitable way to the city.

OREGON

Hutchinson in Portland.—Dr. Woods Hutchinson was the guest of honor at a banquet given by the members of the Portland profession at the Portland Hotel, March 1.

New Officers.—Baker County Medical Society at Baker, February 25: president, Dr. Clifton L. Blakely; secretary, Dr. Claude M. Pearce, both of Baker.——Portland Academy of Medicine: president Dr. Andrew C. Smith; secretary, Dr. Noble Wiley Jones.

Personal.—Dr. J. Christopher O'Day, Portland, has been appointed demonstrator of anatomy at the North Pacific School of Dentistry and Pharmacy, and chairman of the Department of Public Health of the Conservation Association. ——Dr. Ralph C. Matson, Portland, has gone to India to study the prevention and treatment of tuberculosis.

PENNSYLVANIA

Scarlet Fever at State Hospital.—The Norristown State Hospital for the Insane is closed to all visitors for twenty-one days as five cases of scarlet fever have developed there. The doctors of the institution have asked for an isolation building many times, but the legislature has never provided sufficient funds. However, strict precautions are being taken to prevent the spread of infection.

Chiropractors Refused Charter.—Justice Potter of the supreme court of Pennsylvania recently handed down a decision affirming an order of the common pleas court of Pittsburgh denying a charter to an organization known as the Chiropractors' Association of Pennsylvania. The refusal of the charter was based on the ground that the applicant had no legal status under the medical practice act.

Health Lectures.—The third of the series of health lectures under the auspices of the Allegheny County Medical Society was delivered in the East Liberty Young Men's Christian Association, March 10, by Dr. I. Hope Alexander of Pittsburgh on "Tuberculosis—Its Prevention and Cure," illustrated by stereopticon views. The fourth lecture in the series will be delivered March 17 by Dr. James O. Wallace, Pittsburgh, on "Posture and Its Relation to Efficiency."

To License Midwives.—The Bureau of Medical Education and Licensure, on January 31, appointed a committee, consisting of Drs. John M. Baldy, Philadelphia, Adolph Koenig and Daniel P. Maddux, Chester, to arrange for the examination and licensing of midwives under the act of 1913. Examinations will be held at the several state tuberculosis dispensaries. The work will be in charge of the health department officials in each district, and the dispensary chiefs will communicate with midwives in their districts and fix the time and place for examinations.

Philadelphia

Night Clinics.—On March 3, the Jewish Consumptive Institute, 406 Wharton Street, started night clinics for such persons as were unable to attend those in the day time.

Personal.—Dr. Peter H. Lane is in the Chestnut Hill Hospital suffering from a broken leg caused by a fall on an icy pavement.——Dr. Ellwood R. Kirby is seriously ill as the result of infection received in an operation.

Extensive Vaccination.—Since February 11, ten quarantines for small-pox have been established and more than 15,000 persons vaccinated, which has cost the city $675. At present there are nine cases, all directly contracted from a man who came to this city from Baltimore.

Graduate, Not Grand Council.—Dr. Clara Marshall, dean of the Women's Medical College of Pennsylvania, Philadelphia, calls attention to an error in THE JOURNAL for February 28, page 709, regarding the organization of the medical college alumnae. She states that a graduate council was formed, not a grand council, as therein stated.

Visiting Nurses' Society Report.—The twenty-eighth annual meeting of the Visiting Nurses' Society of Philadelphia was held at the central office of the society, March 5. This society employs none but graduate nurses and now has a staff of forty-two. During the past year 10,761 patients were treated and 104,132 visits were made. A nurse has recently been placed at Ardmore, giving the society supervision over the district along the Main Line from Overbrook to Paoli.

SOUTH DAKOTA

Personal.—Dr. Edward C. Day, Platte, accidentally shot himself at the Chamberlain Sanatorium, February 24.——Dr. Stanley A. Milligan, first assistant surgeon at the Battle Mountain Sanatorium, has been transferred to Hampton, Va.——Dr. Denton W. Rudgers, Yankton, who is to leave for California soon, was given a farewell banquet by the members of the First District Medical Society.

Health Superintendents Form Organization.—At a meeting of the county superintendents of Health held in Pierre, January 12, in connection with the regular meeting of the State Board of Health and Board of Medical Examiners, a permanent organization of superintendents of County Boards of Health was formed. The following officers were elected: president, Dr. Edson C. Miller, Brookings; vice-president, Dr. John L. Foxton, Huron, and secretary, Dr. Herman J. G. Koobs, Scotland.

New Officers.—Fourth District Medical Association at Pierre: president, Dr. Theodore F. Riggs, Pierre; secretary-treasurer, Dr. Bertrand M. Hart, Blunt.——Physicians' and Surgeons' Association incorporated at Mitchell, with a capital of $25,000 by Drs. Ellsworth E. King, Mitchell; Creighton P. Farnsworth, Chamberlain; Charles A. Bower, Mitchell, and W. F. De Laney.——Aberdeen District Medical Society at Aberdeen, January 27: president, Dr. Frank Miller; secretary, Dr. William D. Farrell, both of Aberdeen.

WISCONSIN

Maternity Hospital Opens.—The new Maternity Hospital, Milwaukee, which was established on the site of the old Plankinton residence at Sixteenth and Grand Avenues, was formally opened with a reception, February 23.

Societies May Consolidate.—At a special meeting of the Wood County Medical Society held at Marshfield, recently, it was voted to extend an invitation to the Clark County Medical Society to consolidate with the Wood County organization.

Personal.—Fire in the house of Dr. William H. Linke, Milwaukee, did damage to the extent of $1,000.——The house of Dr. Robert M. I. Kinnear, La Crosse, was destroyed by fire, February 23, with a loss of $6,000.——Dr. Joseph Schneider, Milwaukee, has been given a gold medal of honor by the University of Wurzburg.

Sanatorium Notes.—The Tuberculosis Sanatorium of Brown County is to be built on a tract of 26 acres, which was formerly a part of the historic Eleazer Williams grant. The site was acquired at a cost of $3,000, and $22,000 of the appropriation remains available for the erection of the sanatorium.——Health Commissioner Frederick A. Kraft, Milwaukee, has approved the plans of a corrugated iron cottage, 20 by 60 feet, to cost $850, to take the place of the building recently destroyed by fire. At the completion of the building, the city can care for thirty patients.

GENERAL

Deaths from Neosalvarsan in Los Angeles.—The newspapers having reported a number of deaths in Los Angeles from neosalvarsan, we telegraphed our correspondent in that city asking for full particulars. He replied that seven deaths had occurred in the hospital within two days following injection, and that another patient was likely to die; that two theories had been advanced regarding the cause of these deaths: (1) That the ampule which was used and which was covered by paper may have been cracked, and this crack being covered by paper not observed, so that the neosalvarsan was open to oxidation, and thus became changed; (2) that the syringe may have been defective, and this gave rise to changes in the solution; that the remaining ampules of neosalvarsan have been analyzed and are stated to be in good condition. An autopsy report of one of the cases was made by Dr. Stanley P. Black, which showed a somewhat congested spinal cord with marked distention of the blood-vessels and softening of the posterior columns. "Anatomic diagnosis: syphilis of the lung and liver, beginning pneumonia of the right and left lung, pyclonephrosis of the right kidney, irritation, possibly inflammation of the posterior columns of the spinal cord. From the autopsy findings and the clinical history it

was concluded that the cause of death was an irritation of the spinal cord as the result of the injection of neosalvarsan intraspinally." The statement of Dr. A. T. Charlton, who treated the patients, is as follows:

"I first drew off a small quantity of blood from each patient and then removed the clot, leaving a serum with which I mixed a salt solution and the two tubes of neosalvarsan. I then heated mildly and placed in hermetically sealed tubes and placed on ice for twenty-four hours. After another twenty-four hours it was administered in graduated syringe, some of the patients receiving a greater dosage than others. Harry Lane, the surviving patient, received the first and largest amount of the injection. All injections were intraspinally."

The method of preparing the neosalvarsan and serum is not the Swift and Ellis method, in which the neosalvarsan is injected intravenously and the blood withdrawn after an hour, defibrinated and the serum containing neosalvarsan used for intraspinous injection. In this instance, it seems that the neosalvarsan was added to the serums after withdrawal, together with salt solution, the mixture heated and put away on ice and injected the following day. The coroner has stated that he will turn over all his information to the district attorney with a recommendation for the grand jury investigation.

Colleges Given Higher Rating.—At the meeting of the Council on Medical Education of the American Medical Association, held in Chicago, February 24, the following colleges were given higher ratings: The University of Pittsburgh, School of Medicine; Jefferson Medical College, and the Starling-Ohio Medical College (now the College of Medicine of the Ohio State University) were raised from Class A to Class A+. The Atlanta Medical College, Atlanta, Ga., and the Fordham University, School of Medicine, New York City, were raised from Class B to Class A.

Bequests and Donations.—The following bequests and donations have recently been announced:

Episcopal Hospital, Philadelphia, $5,000 by the will of Countess Galli.

Children's Hospital, Philadelphia, $5,000. Wilkes-Barre, Pa., Hospital, $10,000 by the will of Charles E. Dana, Philadelphia.

Allentown, Pa., Hospital, a donation of $30,000 for the construction of an operating room, from Dr. Charles D. Schaeffer.

Maternity Hospital and Howard Hospital for Incurables, Philadelphia, each $5,000, by the will of Joseph Wright.

Boston Lying-In Hospital, $5,000, in memory of Dr. William L. Richardson; St. Luke's Hospital, New Bedford, $50,000, by the will of Mrs. Hannah Bourne Abbe, New Bedford.

Quacks Collecting "Evidence"?—Letters have been received from two different localities describing briefly what seems to be an attempt on the part of quacks to obtain evidence of a damaging nature against reputable physicians. A man, giving various names, calls at physicians' offices and, in some of the cases, applies for a clean bill of health on the ground that he is about to be married. To these physicians he says he has never had any venereal disease. In other cases he informs the physicians that he is suffering from a gonorrheal infection and desires treatment. In each case he asks either for a signed report or for a prescription, as the case may be, and in each case, on paying the bill he requires a receipt. These letters, taken in connection with that published in THE JOURNAL, February 28, page 716, are significant.

Cooperation of State Board and State University.—The offices of the State Board of Health as already announced, have been moved from the Hartman Building which they formerly occupied, to Page Hall at the Ohio State University. This movement is part of Secretary and Executive Officer Dr. Eugene F. McCampbell's general plan to increase the utility of both the board of health and the university and to unite the two in a closer cooperation. The value to be derived from such a union is indicated by the experience of Massachusetts, where Harvard University and the Massachusetts Institute of Technology have, in conjunction, recently established a school for health officers. It is planned to increase the facilities for research in sanitary engineering. Mr. W. H. Dittoe, Director of the Division of Sanitary Engineering, plans to place actual engineering problems before the students of the Ohio State University. In the Division of Communicable Diseases problems which confront the inspectors demanding research along laboratory and field lines will be rendered easy of solution when the ample facilities of the university and of the medical department in connection therewith, are added to those already possessed by the board of health. The Division of Hygienic Laboratories still occupies offices in the Hartman Building but a change will be made as soon as the Botany Building on the campus is vacated and the necessary remodeling completed. When this is done a larger field of usefulness for the laboratories will be opened. The other state departments, of which the State Board of Administration may be mentioned as an example, will be given material aid along this line. Much of the laboratory work now being done for the state is performed at a much greater expense than would be the case were the Hygienic Laboratories to take charge of it. This means of effecting a closer cooperation between the various state departments will not only affect material economy in money but will place at the disposal of the state much more efficient machinery with which to perform its manifold duties. When the laboratories have made this move it is proposed that the various vaccines and antitoxins which play a part in public health work, will be manufactured by the laboratories in connection with the veterinary and laboratory divisions of the university.

FOREIGN

Canal Zone Changes.—Lieut.-Col. Charles F. Mason has been appointed chief health officer of the Canal Zone, to take office April 12.——Lieut.-Col. George D. Deshon has been appointed superintendent of the Ancon Hospital, and presumably superintendent of the Hospital Service of the Canal Zone.

Grants for Scientific Research.—The Robert Koch Foundation at Berlin for Research on Tuberculosis has granted a subsidy of $500 to Professor Lexer of Jena for research on the action of light rays on tuberculous tissue, and to Professor Kayserling of Berlin to carry on his roentgenologic investigation of the distribution and extent of infection in tuberculosis-ridden families.

Deaths in the Profession Abroad.—F. Körte, the oldest physician of Berlin, aged 96, father of Professor Körte, the well-known surgeon. In his prime he took a leading part in all matters affecting the profession in general.——J. Schlimpert, privat-docent of gynecology at the University of Freiburg. ——O. Morisani, formerly professor of obstetrics and gynecology at the University of Naples.——H. von Wyss, privat-docent of internal medicine at the University of Zurich.——H. Grabower, privat-docent of nose and throat diseases at Berlin, and W. Bernoulli of Basel, aged 76.

Anesthetic Society for Scotland.—A dinner was held on February 20 in Edinburgh which was attended by anesthetists from Edinburgh, Glasgow, Aberdeen and Dundee; Dr. D. C. A. McAllum, Edinburgh, was in the chair. At a business meeting held after the dinner, it was resolved to form a society to be known as The Scottish Society of Anesthetists, the objects of which should be "to further the study of the science and practice of anesthetics, and the proper teaching thereof." It was resolved to limit the membership of the society to those practicing the specialty of anesthetics, but that other members of the profession interested in the subject should be invited as guests to the meetings to take part in the reading and discussion of papers. Office bearers were appointed as follows: president, Dr. McAllum; vice-president, Dr. Boyd, Glasgow, and secretary-treasurer, Dr. Stuart Ross, Edinburgh. It is intended to hold two meetings yearly, in April and October, taking each of the four cities in rotation.

American Dental School in China Suggested.—Consul General Amos P. Wilder, at Shanghai, according to the *Daily Consular and Trade Reports*, suggests the founding of a school for teaching dentistry in China on the lines of the Harvard Medical School, Shanghai. The medical school has a faculty of ten physicians and surgeons and is supported by the alumni and friends of Harvard. Wilder says the need for a dental school is great, as dentistry outside of the treaty ports is almost entirely in the hands of the natives whose methods and instruments are crude. A number of American dentists are located in the treaty ports, where their work is found to be satisfactory and many of them have built up good reputations and have large incomes. Wilder says, however, that young American dentists should not be encouraged to locate in China, on account of the frequent stories of disappointment, failure and tragedy among men who have attempted it without having the necessary staying qualities and character. Many of the native dentists are youths who have spent time as assistants in the offices of foreign dentists in China and have thus acquired a smattering of the work. There are no license requirements.

General Gorgas in South Africa.—The *Rhodesia Herald* of January 24 contains an extended account of the visit of General Gorgas to Salisbury, Rhodesia, where he made an address on his work in Cuba and Panama. His address,

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which was illustrated with lantern slides, is given in full in the paper and was received with great interest by the people of Salisbury. He sketched the history of the mosquito theory of yellow fever, malaria and other tropical diseases, and described the experimentation on yellow fever in Cuba, which demonstrated that the mosquito is the only source of transmission of yellow fever. He then described the work in Panama by which the death-rate during the first year or two was cut down from the French figures of about 250 per thousand to six or seven. He also described the life history of the mosquito and the manner in which it transmits diseases and also the method of getting rid of it and guarding against infection in the Canal Zone. General Gorgas also described and illustrated many of the construction features of the canal. The problems of tropical diseases in this portion of South Africa are somewhat different from those in the Canal Zone, inasmuch as there is no yellow fever to contend with, but other mosquito-borne diseases. Malaria is the chief problem in the vicinity of Salisbury, and the speaker who followed General Gorgas thanked him for his address and declared that the eradication of this troublesome infection on the lines laid down by General Gorgas would certainly be taken up by the communities in South Africa. The mayor of Salisbury in welcoming General Gorgas, referred to his work in America and extended congratulations on his promotion to be Surgeon-General of the United States Army.

CANADA

Personals.—Dr. Arthur Wilson has been appointed medical officer of health for Saskatoon, Sask.——Dr. Ernest A. Hall, Vancouver, B. C., has returned from a trip around the world.

Typhoid Near Montreal.—In eight towns, all within a few miles of Montreal, seventy-seven cases of typhoid fever exist, according to reports issued by Dr. Elzear Pelletier of the Quebec Board of Health.

Work of Public Health Nurses.—The public health nurses of Toronto now visit in connection with the Tuberculosis Clinics at the Toronto General Hospital, St. Michael's Hospital for Sick Children and the University Settlement. They also visit the Baby Consultations established by seven social agencies, a work affiliated with the Hospital for Sick Children.

Liquor and Tobacco Legislation.—As the consumption of liquor and tobacco is increasing in Canada, the Dominion Parliament proposes to wrestle with the increase which will probably take the course of curtailing the manufacture of spirituous and malt liquors. One member of the government has a bill to prohibit the manufacture, importation and sale of cigarettes, which will be introduced shortly.

Waste of Water.—The Canadian Conservation Commission has issued some statistics regarding waste of water in various cities. The average consumption of ten typical Canadian and American cities is 160 gallons per head of population per day. In twelve European cities it is only 35½ gallons per head, leaving 120 gallons wasted per head per day in Canadian and American cities. This extra cost has been estimated for a city of 250,000 at $2.45 per inhabitant per annum.

Hospital News.—Stratford, Ont., faces a deficit for its general hospital during the past year, attributable to the high cost of living. The per diem cost of patients was 41.58 cents, while the bulk of the 627 patients paid $6 or less per week, forty-four being free patients. The hospital has a floating debt of over $5,000 and efforts will be made to induce citizens to liquidate the same.——Trouble between the two sections of the management of the Western Hospital, Toronto, has broken out anew over the presentation of alleged unsatisfactory legislation by the board of governors to the Ontario legislature. The trouble surrounds an amendment made to the act of incorporation in 1901, which granted the right to members of the corporation to one vote for every $100 contributed, also the power to cast this vote by proxy. If this is allowed to be exercised it will give the control of the hospital into the hands of a few men. The right has never been exercised until a few months ago. No multiple or proxy voting is allowed to obtain in any other hospital in Ontario, and the malcontents will urge the government to place the Western Hospital on the same basis as the other hospitals of the province. Dr. John Ferguson, the secretary of the board of governors since the hospital was established, states that 50 per cent. of the staff, 80 per cent. of the corporation, and 96 per cent of the board and 96 per cent. of the money interest of the hospital are asking for the present amendments before the legislature. He further states that the most valuable asset the hospital has is that of multiple and proxy voting.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb. 21, 1914.

The Medical Service in India

Western medicine was introduced into India by the medical service of the Indian Army, recruited in the first instance entirely from Great Britain. Civil medical appointments have been given to medical officers of the army and formed valuable emoluments. For some years the medical service has been thrown open to natives, but as the examination for admission takes place in London they formed a small minority of the successful candidates. At the last few examinations there has been a great increase in the number of successful native candidates, owing to a falling off in the number of British candidates. This is attributed to two causes: The insurance act has greatly improved the financial position of the physicians engaged in industrial practice and provided many openings for young men, and there has been dissatisfaction with altered conditions of the Indian medical service. With the establishment of medical schools in India a class of native graduates has arisen which, with the improvement of these schools, has become more and more competent. Naturally the natives object to all the higher civil medical appointments being reserved for the officers of the Indian Army. The government at home sympathizes with this view, and Lord Morley, secretary for India, has issued a memorandum to the Indian government to the effect that these appointments should be thrown open to civilian physicians. This has caused the Indian medical service of the Indian Army to become less popular in Great Britain.

The native point of view is well expressed in a representation of the Bombay Medical Union to the government. This union was established in 1883 and is the leading organized body of Indian medical graduates. It now asks for the equalization of the status of Indian aspirants for the medical services with that of their European compeers. The union points out that the only door for the admission of Indians into the Indian medical service, which covers all the higher posts in the country, is the competitive examination held biannually in London, so that the bulk of the Indians are shut out. The result is that the Indians are relegated to the lower grades of "civil assistant surgeons." They are shut out from professorships in colleges, important civil appointments, and specialists' posts in bacteriologic and sanitary departments, jails and lunatic asylums. The medical service of the Indian Army is essentially a military service, and those of its members in civil employ are "lent." However necessary this "lending" was when the germ of western science had not taken root in India, it is no longer necessary. The union asks for the total separation of military and civilian appointments and the constitution of a new service to be called the Indian Civil Medical Service, which would consist of professorships, higher administrative and expert appointments, and appointments in bacteriologic, chemical, scientific and sanitary departments and lunatic asylums. The appointees should be recruited from the entire medical profession. An unfortunate result of the present system is that an army surgeon is often appointed to a professorship in consequence of his military rank, regardless of his fitness for teaching the particular subject. Moreover, he is so overburdened with army work and private practice that he is not able properly to attend to his professorial duties.

The other side of the question is given in a statement made by invitation to the Secretary of State for India by the British Medical Association. The secretary requested the association to assist him in ascertaining the causes of the falling off of candidates for the medical service of the Indian Army. It is pointed out that less than a quarter of a century ago the private practice among all classes and races in India lay in the hands of the officers of the medical service of the Indian Army, and large fees were quite frequently and easily obtained. Now this is rapidly passing into the hands of native practitioners, with the result that in many cases the officer has to live on his pay alone, which is insufficient. To make matters worse, the government of India introduced regulations limiting the fees of medical officers. With regard to the allegation that the army surgeon interferes with the practice that rightly belongs to the Indian practitioner, it is pointed out that it is the army surgeons who have trained the men by whom it is now proposed so lightly to replace him. Indeed, already the teacher has been largely replaced by the pupil, and this will go on. The native profession is in a virile state, and instead of officers of the service encroaching on the rights of independent members of the profession it

is they who have acquired the practice formerly enjoyed by officers in the service. It is not to be denied that a large imperial policy might demand and even justify the replacement of the men of the governing class by those of the governed, provided it could be shown that the time had come for such a step, and that the men replaced were compensated on such a scale as to remove all trace of a suspicion that they had been treated unfairly. But the time has not come, and for many years India will need the best men the profession at home can supply to foster its still immature profession. High standards of work and morals must be set before the Indian students. These can be set only by men whose enthusiastic devotion to duty, and unhesitating obedience to a high code of probity and honor, are the inheritance of long generations of thought and training. To take the step now contemplated by the government of India is to cut off the supply at its source. Apart from the effect on the war reserve, the result would be a wide-spread deterioration in the morale, the training and the efficiency of the medical profession in India.

Action for Negligent Administration of Anesthetic

A girl, aged 6, underwent operation for adenoids and enlarged tonsils. The operation was performed successfully, but the child's face was severely blistered in consequence of the spilling of the anesthetic. An action was accordingly brought for damages against the London County Council, at one of whose school clinics the operation was performed. A physician who attended the child subsequently gave evidence to the effect that ointment should have been put on the face when any anesthetic containing chloroform was used. He admitted that a slight burn might be unavoidable if a child struggled much. He had never known such a severe burn from an anesthetic even when no ointment was used. From the character and area of the burn it looked as if the anesthetic had been spilled. The mark of the burn was still apparent and it might prove a permanent disfigurement. The jury found that the anesthetist had not been guilty of negligence, and a verdict for the defendants was accordingly given.

The After-Care of the Insane

The organization known as the After-Care Association, formed to facilitate the readmission into social life of poor persons discharged cured from asylums and hospitals for the insane, is a most useful one. At the annual meeting just held, Sir Thomas Barlow, president of the Royal College of Physicians, presided. He said that formerly charitable persons were content to relieve the immediate needs of the poor, the sick, the maimed and the blind, but now it was recognized that those who had been afflicted ought to be set on their feet again. There had therefore been a great development in the establishment of convalescent homes and garden and farm colonies in connection with sanatoriums in order to bridge over the interval between recovery from illness and the return to wage-earning, and there had also been a great development of auxiliary associations which gave to public institutions help that voluntary aid alone could supply. Social problems could not be solved by leaving everything to be done by the state—a very shallow and mischievous proposal—but the solution lay in supplementing the efforts of the public authorities and the old endowed charities by enlightened voluntary effort. Of the auxiliary institutions, none deserved support more than the After-Care Association. The average charitable person did not sufficiently reflect on what was to become of those who were discharged from asylums. Persons' minds should be disabused of the pessimistic idea, which used also to be held about consumption, that cases of mental disease were hopeless.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Feb. 20, 1914.

Death of Alphonse Bertillon

M. Alphonse Bertillon, director of the legal identification service, has just died of pernicious anemia at the age of 66. He was not a medical man, but his father was Dr. Louis-Adolphe Bertillon, the well-known statistician, and one of the founders of the Ecole d'anthropologie and the Société d'anthropologie, and his brother was Dr. Jacques Bertillon, formerly head of the department of municipal statistics of the city of Paris. It was in 1877, entirely by chance, that Alphonse Bertillon become a member of the prefecture of police. Two years later he was shifted to the photographic service where he developed the anthropometric system. The photographic department was a practically worthless chaos of documents. Bertillon tried to arrange them in some order. He thought at first of utilizing the shades of the eyes and hair, but such a base was too unstable and too changeable for the foundation of a serious classification, particularly since hair whitens with age. Bertillon had no better success in the use of the differences in stature, to which he subsequently resorted. It was then, remembering the work of his father, that he had the idea of using anthropometric traits. Later he devoted himself to the study of finger-prints, which are especially valuable in the identification of young criminals, since until the age of 20 or 21 all anthropometric traits change and tables made before that age soon become worthless.

Dr. Manouvrier of the Ecole d'anthropologie, who examined the brain of Bertillon, found that it weighed 1,525 gm. This is remarkable (the average is 1,360 gm.), especially since the brain was anemic and weakened by the long and debilitating sickness. Dr. Manouvrier, who has examined the brains of a number of well-known persons—notably that of Dr. Louis-Adolphe Bertillon, who died in 1883—will publish later a complete study of the brain of M. Alphonse Bertillon.

Health of the Army

At present the general health of the army is not good. Many cases of cerebrospinal meningitis and epidemics of measles and mumps have been noted in various garrisons, and there are numerous cases of grip and affections of the respiratory organs. The reasons for this state of affairs are many. There is, of course, the exceptional severity of the winter, the consequences of which are now making themselves felt. But the principal cause is the application of the new three-year service law. For one thing, this law has the effect of calling two classes of recruits into service simultaneously, and it is well known that young soldiers are the most frequent victims of sickness. On the other hand, in a number of stations it was impossible to offer the troops anything but unfinished or just finished quarters, involving the usual inconveniences of new buildings, such as humidity, etc.

Appendicitis from Chipping of Enameled Ware

It is well known that in the etiology of appendicitis small pieces of enamel from the chipping of various utensils are often implicated. The Conseil d'hygiène publique et de salubrité du departement de la Seine last year instructed M. Martel, head of the veterinary service, to investigate the often-noted presence of fragments of enamel in sausages. M. Martel demonstrated the danger of enameled cooking-utensils, which always end by chipping. The Conseil d'hygiène therefore asked the chief of police to prohibit the use of such utensils, and, considering the importance of the question, decided to announce its decision to the Minister of the Interior so that a general interdiction might be made.

The Conseil supérieure d'hygiène, interested by the question, had requested Dr. Bordas to make a similar investigation, and this confirmed M. Martel's conclusions in every particular. But M. Mirman, director of the public charities and hygiene under the interior department, came to the conclusion that it was impossible, under the present law, to issue a formal edict of prohibition. This will not be possible until the Senate has passed a law which it is now considering. Meanwhile, he is requesting prefects to inform butchers and sausage makers of the danger to consumers of food cooked in enameled utensils, and to use different ones. On the suggestion of Senator Cazeneuve, M. Mirman has called attention to another frequent cause of appendicitis, namely, the filings left in mended bread-troughs. He asks that bakers discontinue the use of these.

Personal

At the meeting of the Académie de médecine, February 17, two foreign correspondents were elected. The names of Bordet, Brussels; Henrijean, Liége; Flexner, New York, and Dr. Minot, Boston, were presented. Bordet and Henrijean were elected. Bordet is professor of bacteriology of the Faculté de médecine de Bruxelles, and is known by his works on immunity and on the deviation of complement. Dr. Henrijean is a professor on the Faculté de médecine de Liége and will be president of the coming congress of French-speaking doctors, which will be held this year at Brussels.

Gold medals of the Carnegie foundation, for those who have contracted mortal diseases or very serious diseases in the performance of their duties, have been awarded to Drs. Bergonie, Bordeaux and Guilloz, Nancy, and to M. Infroit, head of the roentgenographic laboratory of the Hospital of Salpêtrière, who received in addition, 10,000 francs.

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Marriages

ALFRED VARNEY BLACKSTONE, M.D., Absarokee, Mont., to Miss Minnie McKay of Missoula, Mont., at Absarokee, February 21.

HAROLD FAIRCHILD BUDINGTON, M.D., Springfield, Mass., to Miss Josephine Elizabeth Eckel of Bridgeport, Conn., February 26.

THOMAS FRIEND WILLSON, M.D., to Mrs. Clara Buckingham Downs, both of Arcola, Miss., at Memphis, Tenn., January 15.

JOSEPH INGRAM MERSHON, M.D., Mount Carroll, Ill., to Miss Dorothy Canfield of Wabasha, Minn., in Chicago, February 21.

WORTH ROSS, M.D., Detroit, Mich., to Miss Alice Louise Browne of Bay City, Mich., January 22.

MARTIN CROWELL MADDAN, M.D., to Miss Fern Lawrence Gould, both of Old Town, Me., March 5.

ABRAM REYNOLDS MOIST, M.D., to Miss Agatha M. Weber, both of Dayton, Ohio, February 17.

WILLIS HARVEY TAYLOR, M.D., to Mrs. Myrtle Brown, both of Omaha, Neb., recently.

Deaths

Matthew James McKinnon, M.D. University of Maryland, Baltimore, 1853; a member of the Medical Society of the State of Pennsylvania; surgeon of the Forty-Third Pennsylvania Volunteer Infantry during the Civil War; at one time city treasurer of Hagerstown; one of the organizers, and for several years president of the York County Medical Society; one of the founders of York Hospital; for nearly forty years local surgeon for the Pennsylvania system, and for two terms a member of the Pennsylvania legislature; died at his home in York, February 23, aged 82.

John Frederick Welch, M.D. Bellevue Hospital Medical College, New York City, 1880; a Fellow of the American Medical Association; president of the Norfolk South District Medical Society; for several years a member of the Board of Health and city physician of Quincy, Mass., and chairman of the trustees of the Quincy City Hospital; first president of the Quincy Anti-Tuberculosis Society; died at his home February 23, from disease of the kidney, aged 58.

Charles Irwin Hill, M.D. Baltimore Medical College, 1899; for several years a member of the faculty of his Alma Mater; from 1900 to 1904 assistant surgeon, N. G. Maryland, with the rank of captain, assigned to the Fourth Infantry; formerly assistant physician and pathologist at the Springfield State Hospital and Mount Hope Retreat; died at his home in Baltimore, February 24, aged 35.

Ralph Lyman Parsons, M.D. New York Medical College, New York City, 1857; a member of the Medical Society of the State of New York, and New York Academy of Medicine; superintendent of the New York City Asylum for the Insane from 1865 to 1877; thereafter in charge of a private sanatorium in Ossining; died at his home in that place, February 26, aged 85.

George W. Nafe, M.D. Philadelphia University of Medicine and Surgery, 1871; Bennett Medical College, Chicago, 1886; a member and once president of the Michigan State Medical Society; president of the State Board of Registration in Medicine; health officer of Newaygo County; was found dead in his office in Fremont, February 24, from heart disease, aged 65.

Hiram J. Coon, M.D. Medical College of Indiana, Indianapolis, 1881; district surgeon of the Big Four and Vandalia systems, and vice-president of the Association of Surgeons of the Pennsylvania system; died at his home in Colfax, February 27, from cerebral hemorrhage.

Octave G. Browne, M.D. Tulane University, New Orleans, 1882; for many years a member of the St. Gabriel Parish school board, and a practitioner of St. Gabriel; was found dead from exposure on a road near the Monticello Penal Farm, February 25, aged 57.

Samuel G. Meredith, M.D. Eclectic Medical Institute, Cincinnati, 1885; a member of the Missouri State Medical Association; professor of diseases of children in the Eclectic Medical University, Kansas City; died at his home in Cowgill, Mo., February 20, aged 62.

Ira D. Hopkins, M.D. University of Buffalo (N. Y.), 1869; one of the founders of the Utica, N. Y., Dispensary, and for more than half a century a practitioner of that city; died at his home, February 23, five days after an accidental fall at his office, aged 81.

Charles William Imwall, M.D. Dearborn Medical College, Chicago, 1907; College of Physicians and Surgeons, Chicago, 1908; a Fellow of the American Medical Association; was found dead in his apartment in Chicago, March 4, from heart disease, aged 33.

John H. Evans, M.D. Tulane University, New Orleans, 1884; a Fellow of the American Medical Association, and president of the Texas State Board of Medical Examiners; died suddenly from heart disease, February 24, at his home in Palestine, aged 57.

John Fremont Hurlbut (license, Idaho, 1902); formerly a Fellow of the American Medical Association; county physician and chairman of the board of health of Nez Perce County, Idaho; died at his home in Lewiston, February 22, from nephritis, aged 52.

Stacy Hemenway, M.D. Chicago Medical College, 1862; a Fellow of the American Medical Association; and for many years surgeon at the Klamath Indian Agency, Yainax, Ore.; a veteran of the Civil War; died at his home, February 19, aged 77.

John Albert Cook, M.D. Trinity Medical College, Toronto, 1895; a member of the Indiana State Medical Association; and a resident of Goshen, Ind.; died in St. Vincent's Hospital, Toledo, Ohio, February 25, from Hodgkin's disease, aged 39.

Charles Edward Spring, M.D. Western Reserve University, Cleveland, Ohio, 1903; aged 34 was almost instantly killed while attempting to jump from an automobile which was apparently about to collide with a street-car, February 28.

Hiram B. Denman, M.D. Cincinnati College of Medicine and Surgery, 1869; a member of the Ohio State Medical Association; for many years a practitioner of Lena; died in Sidney, Ohio, February 14, from cerebral hemorrhage, aged 71.

Anna Mary Goebel, M.D. University of Michigan, Ann Arbor, 1885; said to have been the first woman physician of Lima, Ohio; died at the home of her brother in Washington, D. C., February 28, from disease of the spinal cord, aged 62.

Alfred Carty Stratton, M.D. Medico-Chirurgical College of Philadelphia, 1913, and honor man of his class; died February 26, from scarlet fever, contracted while fighting an epidemic at his home in Florence, N. J., aged 23.

Storm White, M.D. New York Homeopathic Medical College, 1879; for six years connected with the Metropolitan Hospital pathologic laboratory, Blackwell's Island, N. Y.; died at his home in New York City, February 26, aged 57.

William R. Gieser, M.D. Hahnemann Medical College, Philadelphia, 1892; a police surgeon of Philadelphia and a member of the staff of Hahnemann Hospital; died at his home, February 26, from heart disease, aged 55.

Charles S. Rannells, M.D. Washington University, Baltimore, 1876; a member of the Kansas Medical Society, and for thirty-six years a practitioner of Allen County; died at his home in Savonburg, about February 26.

Salathiel Bainbridge Ayres, M.D. Rush Medical College, 1866; a Confederate veteran; local surgeon of the Chicago and Alton system at Louisiana, Mo.; died at his home in that city, February 24, aged 75.

Frederick Farnsworth, M.D. Bellevue Hospital Medical College, 1867; since 1869 in manufacturing business; died in his apartments in New London, Conn., February 23, from cerebral hemorrhage, aged 71.

Thomas Mills Nixson, M.D. University of Pennsylvania, Philadelphia, 1858; physician to the Calloway County, Mo., Infirmary; a "Forty-niner"; died at his home in Ham's Prairie, February 23, aged 85.

Elisha M. Bean, M.D. Cincinnati Physio-Medical College, 1871; a practitioner of Athens County, Ohio, since 1839; died at the home of his daughter in Athens, February 22, from senile debility, aged 93.

William J. Bates, Jr. (license, W. Va., 1881); for many years a member of the board of commissioners of Ohio County; died at his home in Wheeling, February 25, from heart disease, aged 67.

Edmund A. Rawson, M.D. Drake University, Des Moines, Iowa, 1888; a member of the Iowa State Medical Society, and a veteran of the Civil War; died at his home in Madrid, February 16, aged 73.

James Drysdale Balfour, M.D. Western University, London, Ont., 1887; professor of obstetrics and pediatrics of his Alma Mater; died at his home in London, January 7, from lobar pneumonia, aged 57.

Christopher C. Walker, M.D. Tulane University, New Orleans, 1866; a Confederate veteran; formerly a practitioner of Gainesville, Tex.; died at his home in Los Angeles, February 23, aged 72.

Nathan B. Gardner, M.D. Missouri Medical College, St. Louis, 1889; a Fellow of the American Medical Association, and a practitioner of Loami, Ill.; died at Biloxi, Miss., February 27, aged 54.

James Thomas Kinsler, M.D. Bellevue Hospital Medical College, 1867; surgeon of Volunteers during the Civil War; died at his home in Omaha, February 20, from cerebral hemorrhage, aged 71.

Henry Connell Allen, M.D. New York University, New York City, 1888; local surgeon of the Southern Pacific system; died at his home in San Fernando, Cal., February 22, aged 50.

Alexander Ennis, M.D. Albany (N. Y.) Medical College, 1855; one of the oldest practitioners of Schenectady County, N. Y.; died at his home in Pattersonville, February 16, aged 84.

John F. Shaffner, M.D. Medical College of Ohio, Cincinnati, 1875; a veteran of the Civil War; died at his home in Willshire, Ohio, February 7, from cerebral hemorrhage, aged 85.

W. A. Love, M.D. College of Physicians and Surgeons, Keokuk, Iowa., 1878; a pioneer practitioner of Wayne County, Neb.; died at his home in Carroll, February 18.

Edmund B. Cummings, M.D. Kansas Medical College, Topeka, 1904; a member of the Kansas Medical Society; died at his home in Bronson, February 13, aged 41.

George W. Cook, M.D. Chicago Homeopathic Medical College, 1891; formerly of Holt, Mich.; died at a sanatorium in Howell, Mich., about February 10, aged 48.

Samuel M. McDowell, M.D. Medical College of Ohio, Cincinnati, 1880; died at his home in Elko, Nev., January 5, from pulmonary tuberculosis, aged 73.

Alvah H. Dorris, M.D. Hahnemann Medical College, Chicago, 1875; died suddenly at his home in Lincoln, Neb., February 23, from angina pectoris, aged 76.

Paul Rose, M.D. Hahnemann Medical College, Chicago, 1893; formerly of Flint, Mich.; died at his home in Highland Park, Detroit, February 20, aged 46.

Gustave Eduard Holmberg, M.D. Eclectic Medical College of the City of New York, 1906; died at his home in Peekskill, N. Y., February 18, aged 43.

Belle Shotwell Howard, M.D. Homeopathic Medical College of St. Louis, Mo., 1883; formerly of Peoria, Ill.; died in Hollywood, Cal., February 7.

Henry Irwin Rankin, M.D. Western Pennsylvania Medical College, Pittsburgh, 1896; died at the home of his sister in Chicago, recently, aged 45.

Albert Henry Tompkins, M.D. Boston University School of Medicine, 1875; died at his home in Jamaica Plain, Boston, February 14, aged 70.

Anselm Dimmic Hatch, M.D. College of Physicians and Surgeons, Baltimore, 1882; died at his home in Orleans, Mass., January 4, aged 50.

John Gregg Follin, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1861; died at his home in Plymouth, Ill., February 5, aged 88.

George Foster Forbes, M.D. Boston University School of Medicine, 1874; died at his home in Worcester, Mass., January 30, aged 82.

Whitfield Brooks, M.D. Columbia University, Washington, D. C., 1861; of Rosman, N. C.; died at Lake Toxaway, January 17, aged 73.

John Blandeer Smith, (license, Pennsylvania). A practitioner since 1866; died at his home in Lawrenceville, December 31, aged 74.

Robert G. Hassard, M.D. Yale University, New Haven, Conn., 1862; died at his home in Thomaston, Conn., recently, aged 71.

Miles Scott, (license, Tennessee, 1889). Died at his home near Barrenplain, February 12, from heart disease, aged 58.

Frederick P. Townsend, (license, Maine, 1895). Died at his home in Newport, Dec. 27, 1913, aged 73.

J. C. F. Maloney, (license, Kansas, 1901) died at his home in Shawnee, February 17, aged 83.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

GRAND PRIX AND GOLD MEDALS FOR SALE

Max Kaiser Offers to Procure "Awards of Merit" at Various International Exhibitions — Price, Four Hundred Dollars

There was a time when the manufacturer who could point to the "Grand Prix" or the "Gold Medal" his product had been awarded at some exhibition was considered to have a valuable advertising asset. Possibly there was a time when medals and prizes were awarded with an eye single to the excellencies of the goods and bore no relation to the amount of money paid by exhibitors to the organizers of the exhibition. Possibly there are, even to-day, occasional awards made on a basis of pure merit, but they are probably few and far between. The matter which follows throws an interesting light on this subject. Within the past two months manufacturers have received a letter on the stationery of the "International Exhibition, Paris, 1914." The letter came from the "Commissioner-General" of the exhibition, one Max Kaiser, 24 Holborn, London, E. C. Here it is:

"*Dear Sirs:*—I beg to draw your attention to the great INTERNATIONAL EXHIBITION of Alimentation, Pure Food, Hygiene, Beverages, Drugs and allied trades, which will be held at Paris in March, 1914, inviting you to partake with your manufacture at this INTERNATIONAL EXHIBITION. I beg to point out that the aim of this Exhibition is to introduce Foreign Manufactured Goods, Proprietary Articles, Patents, etc., to the French and Foreign Markets, and to open up or extend new channels for such goods.

"A Commercial Office at the Exhibition Building, under the Commissioner General's own supervision, with a well-trained staff, will do everything required in the interest of Exhibitors, such as effect sales by circularizing, or inviting prominent buyers to call at your particular stall to judge for themselves the merits of your Exhibit, and in this way bring the American Manufacturers in direct touch with the Foreign markets and the Buylag Public.

"This Commercial Office will also negotiate with the Representatives on your behalf: at the same time undertaking to arrange your Exhibit, supply all necessary fittings, decoration, the display, maintenance, repacking and returning of the Exhibit, and also to represent you before the Public and Jury in such a manner as to make certain that your Exhibit shall be awarded first honors (GRAND PRIZE OR GOLD MEDAL).

"You will understand that such an award obtained at this INTERNATIONAL EXHIBITION means an everlasting advertisement as an official acknowledgment and convincing proof to the Superior Quality of your goods, and will certainly put you in front of your competitors on the home market, and naturally increase your sales considerably.

"I might mention here that many a big business has been built up and small concerns been prominently brought to the notice of the Public by Exhibiting. In many cases I have been able to interest Authorities and Reigning Houses in Exhibits under my care, and I have opened up or extended markets for firms Exhibiting under my direction.

"I enclose herewith a list containing some of the most prominent American and English Firms whom I have represented at European Exhibitions and for whom I achieved splendid results.

"I could arrange your Exhibit for the amount of $400, to be paid one-half on allotment and the balance on receipt of an award (Grand Prize or Gold Medal).

"Trusting that this will be of interest to you, I shall be pleased to receive your reply by return mail, and give you any further particulars you may desire. Yours faithfully,

THE COMMISSIONER GENERAL.
(Signed) Max Kaiser.

"I can also accept Exhibits on exactly the same terms for the INTERNATIONAL EXHIBITION, Rome, 1914."

The list Mr. Kaiser enclosed with his letter was a printed sheet, giving the names of a number of American and British manufacturers whom Kaiser claims to have "represented" at various "International Exhibitions." The majority of the concerns named are breweries, but there is a good sprinkling of "patent medicine" companies and a few miscellaneous manufacturers. In the American list there are two nostrum concerns named that will be more or less familiar to our readers. They are:

Alonzo O. Bliss Company, Washington, D. C. This company sells "the Great Blood Purifier, Kidney and Liver Regulator" known as "Bliss' Native Herbs." According to Max Kaiser, the Alonzo O. Bliss Company obtained one Grand Prize and one Gold Medal.

Waterbury Chemical Company, Des Moines, Iowa. This company exploits what used to be known as "Waterbury's Cod-Liver Oil Compound," which, from its lack of cod-liver oil,[1] was impelled to change its name to "Waterbury's Compound." Kaiser states that the Waterbury Chemical Company received four Grand Prix and four Gold Medals.

Briefly the proposition submitted by Max Kaiser is this: For $400 he will make all arrangements for a manufacturers' exhibit at one of the numerous "International Exhibitions." Further, he practically guarantees that this exhibit will receive either a "grand prize" or a "gold medal"; in fact, the manufacturer need not complete the payment of Kaiser's charges until the prize or medal has been awarded!

International Exhibition, Paris, 1914

UNDER THE HIGH PATRONAGE OF:

The Minister of Agriculture.
The President of the General Council.
The President of the Municipal Council of Paris.
The Prefect of the Seine.

March 1914

The Director of General Administration.
The Mayor of La Ville de Neuilly.
The President of the Touring Club of France.
The President du Syndicat du Commerce.

Commissioner-General: MAX KAISER. Esq. 24, HOLBORN LONDON, E.C.

Telephone 179 Holborn.
Cable Address, PATRONIZE

Photographic reproduction (reduced) of the letter-head of the stationery on which Max Kaiser offers to "make certain" that those who exhibit their products under his direction—price, $400—shall receive a Grand Prix or Gold Medal.

The value of "awards" obtained in this way is, of course, evident. As the public becomes better informed on the subject of international exhibitions, the grand prix, gold medals, and other "awards" made at such exhibitions will be appraised at their true value.

THE NARROWING CIRCLE

Dr. Kidd Forsakes Quackery for Vaudeville, While Mr. Griffin Sells His Typewriters

> "Dr. James W. Kidd, who has been the head of the physicians' staff at the Kidd Medical Company since that concern has been in business, has taken a nine-year lease on the Orpheum Theater at Muscatine, Iowa . . . Dr. Kidd . . . will open the theater on March 1st as a standard, high-class vaudeville theater.
>
> "Dr. Kidd's departure from the city is brought about by the fact that the Kidd Medical Company is gradually going out of business. The typewriters owned by the concern, which number several hundred, are now being sold and the force has been greatly cut down in the past few months . . .
>
> "It is said that W. M. Griffin, the head of the concern, has not yet decided what to do with the company's big building on Fairfield Avenue."

These extracts from the Ft. Wayne (Ind.) *News* of Feb. 26, 1914, are a sermon in themselves. For some years Ft. Wayne, Ind., has had its postal receipts enormously augmented by the activities of one William M. Griffin of that city. These same activities, incidentally, have given Ft. Wayne an unenviable and world-wide reputation as the home of some of the most impudent and heartless mail-order medical frauds in the world.

Griffin is a suave gentleman, who, some years ago, took over what was known as the Davis Medical Company, of which J. W. Kidd, M.D., was medical director. The name of the company was changed to the "Dr. J. W. Kidd Company," which did a fraudulent medical mail-order business, treating, it seems anything from corns to consumption. The fraud prospered. Money poured in and Mr. Griffin became wealthy; also, as is often the case, he became more or less of a power in his town and state. He identified himself with various commercial interests, was said to be a stockholder in a number of concerns, which gave him acquaintances among the substantial business men of his locality. Whenever subscriptions were being taken for laudable objects, Mr. Griffin's name usually appeared with a substantial donation. It is said that during one of the political campaigns Griffin furnished considerable money and that one of his "doctors" was the campaign manager for a congressional candidate. He is said, further, to have been a director of at least one of the local banks, and the names of some of the local banks have been extensively used as an advertising asset in his quackery. For some time Griffin was president of the Commercial Club of his city. The money he made so easily—and cruelly—was spent freely, whenever subscriptions for philanthropic or commercial enterprises were called for.

In addition to the "Dr. Kidd" mail-order fraud, Griffin also operated a concern under his own name that conducted a wagon-peddling business in various parts of the country. As the Kidd fraud prospered, Griffin extended his mail-order operations. The "Dr. Bertha C. Day Company" was one of Griffin's Ft. Wayne enterprises that made a "specialty" of the treatment of "diseases of women" on the mail-order plan. The Ovelmo Company, also of Ft. Wayne, was another Griffin mail-order concern, selling a "cure" for skin diseases. Companies almost identical with the Bertha C. Day concern were opened in San Francisco and Atlanta, under the names, respectively, of the Woman's Remedy Company and the Atlanta Remedy Company.

The utter fraudulence of the Bertha C. Day concern was made plain through an exposure[1] in THE JOURNAL, April 1, 1911. Following this exposure, Bertha C. Day left Griffin's employ, another renegade physician was taken in her stead, and the name of the Company changed to the "Woman's Health Institute." Reprints of THE JOURNAL'S article on Bertha C. Day were sent to every officer of one of the Ft. Wayne banks that had permitted its name to be used as an advertising asset by the Day fakery, and reprints also were sent to more than fifty Ft. Wayne physicians. Several thousand of these reprints have since been sent broadcast over the country. Apparently this publicity has had its effect.

It may be safely assumed that Griffin is not closing his fraud-factory for any other reason than that of expediency. Those familiar with local conditions used to express the opinion that Griffin was so firmly entrenched, commercially, politically and socially, that it would be well-nigh impossible to put an end to his mail-order frauds. What was apparently impossible of accomplishment by municipal or state action has been found feasible through federal intervention. The Griffin concerns have defrauded thousands of people through the United States mails. It is but simple poetic justice that the postal authorities should finally prove to be Griffin's nemesis.

There is little doubt that the light thrown on this dirty business by the American Medical Association is largely responsible for the breaking up of an enormously prosperous and utterly fraudulent enterprise. As we said at the outset, Ft. Wayne will doubtless suffer the loss of many hundreds of thousands of dollars in postal receipts from the closing of Griffin's fakeries. On the other hand, she will gain in self-respect and in reputation much more than she will lose. The time is coming when cities will be as jealous of their reputation as are individuals. When that time comes, the mere lure of increased postal receipts will not be a sufficient sop to the civic conscience to permit the establishment of cruel and heartless enterprises. Meanwhile, that dark circle of semi-legalized fraud in which the medical mail-order fakers work is narrowing. May it diminish to the vanishing point!

1. For THE JOURNAL'S exposure of this product see "Propaganda for Reform," eighth edition, page 118.

1. Reprinted in pamphlet "Viavi, Female Weakness Cures and Allied Frauds," price 6 cents.

For Truth.—"The fact is that the most useful parts of science have been investigated for the sake of truth, and not for their usefulness."—Clifford.

Correspondence

A New Method for Preserving Complement for Making the Wassermann or Noguchi Blood-Test

Any one familiar with the Wassermann or Noguchi blood-test knows that the complement, or guinea-pig blood-serum, will lose all its complementary power within from forty-eight to seventy-two hours. I fancy that every man doing these tests has at least wondered if one could in any way preserve the guinea-pig serum, and consequently avoid having to collect fresh serum at least twice a week.

I have found by laboratory experiments that a 25 per cent. saline solution will preserve the complement in an ordinary test-tube, if in an ice-box, for two or three weeks, and, if sealed in capillary tubes, for a month or two.

I use a 40 per cent. dilution of guinea-pig blood-serum diluted with a 25 per cent. saline solution. When making the test I use a 0.6 per cent. saline solution instead of the 0.9 per cent. solution as recommended by our leading authorities. When I add 0.1 c.c. of the 40 per cent. dilution I get approximately 0.9 per cent. saline solution. This does not affect the reliability of the test in any way.

F. D. AUSTIN, M.D., Charlotte, N. C.

Some Glycothymoline Logic

To the Editor:—Detail men as a class have a rather poor opinion of physicians they visit. This may not appear in the regular monologue but it always comes out on cross-examination. If you stop a detailer in the middle of his rime and put a query of your own, he soon shows how little he knows about the subject he is trying to teach, and how much less he thinks you know about it.

If you timidly mention a report of the Council on Pharmacy and Chemistry which differs in any particular from the data handed out by the monologist, he never hesitates to tell you bluntly of what a parcel of pikers the Council is composed. The secretary of the Council, who signs these ridiculous reports on proprietary preparations, is merely trying to satisfy a personal grudge which it seems the secretary has long nursed against various and sundry proprietary manufacturers! So a Mulford representative recently complained; also a Salhepaticalite.

Looking back over several years, I recall but one thing a detail man ever told me which was worth the time given him. That was a secret imparted by a Glycothymoline agent.

This Glycothymoline man was so jovial and good natured that it was utterly impossible to show him the palms of my hands. And besides, he started right off the bat to put me down for several extra pint bottles to follow up the good work he hoped I would do with the dozen small sample vials, each with the name blown in the glass to insure the doctor against substitution by unscrupulous druggists—though just how the u. d. was to effect the change between the doctor's office and the patient's hands the agent did not take time to explain. In fact his talk was very much like this paragraph—rambling on and on, without a pause for breath or interruption, until you hardly know at the end just what was said at the beginning, and before you can collect the thread of thought the agent is off again on another long tack and you trailing after him like a bather on a plank towed by a speed boat.

But at last the agent choked on a long word, and while he paused for a fraction of a second to clear his throat I seized the opportunity and remarked that I never prescribed things with the name blown in the bottle, nor had I any need for Glycothymoline. The National Formulary furnished me a perfectly satisfactory preparation in cases which needed an alkaline wash.

This was quite a long rejoinder for a doctor to make in such an interview, I am well aware, but you see the man was almost choking and he could not stop me as soon as he would have liked. Presently, however, he swallowed that long word and raised his admonitory index-finger.

"Ah, but that's just the trouble with the N. F. imitation, Doctor," he declared. "That's just the trouble. I'm glad you brought that question up. The N. F. imitation isn't alkaline at all—it's acid, irritating. I know, because I worked in a drug-store myself and I've made gallons of the N. F. stuff—barrels of it, and it's acid, irritating. Now our product—"

"No. No," I shouted, gathering all my available strength and catching the agent on the end of his wind, "No, I've prescribed it and know it's alkaline, and not irritating."

But the agent, like the old lady's companion in the Mother Goose book, simply would not get over the stile, so we decided to test the thing. We got some red litmus paper and a bottle of Liquor Antisepticus Alkalinus, N. F., which I happened to have in the office. We thrust the red litmus into the solution and got the most beautiful reaction—the bluest detail man I ever saw.

"Well, that's one on me," he admitted after a long and alarming silence. "I'll admit I'm in wrong. But our product has a purer alkalinity anyhow."

"Purer nonsense!" I replied. "Now you're sparring for wind, aren't you, really?"

Then the agent gave up. "Doctor, I'll say this much," he confided as we shook hands. "Most of the doctors I call on swallow most anything a man says. I'm darn glad they ain't all so particular! Good-by!"

And the moral: Why *is* a detail man anyway?

WILLIAM BRADY, M.D., Elmira, N. Y.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

ARTICLES ON THE EFFECT OF TOBACCO-SMOKING

To the Editor:—I have a student who is conducting research work in connection with the effect of moderate smoking on heart-rate and blood-pressure, and I should appreciate a list of references to this topic.

G. B. AFFLECK, A.B., M.P.E., Springfield, Mass.

ANSWER.—Following is a list of references to literature on this subject:

The Pharmacology of Tobacco-Smoke, editorial, THE JOURNAL, Jan. 30, 1909, p. 386.

The Use of Tobacco, editorial, THE JOURNAL, July 2, 1910, p. 32.

The Effects of Tobacco on Body and Mind, Current Comment, THE JOURNAL, Oct. 1, 1910, p. 1206.

Some New Evidence on the Tobacco Question, Current Comment, THE JOURNAL, Nov. 16, 1912, p. 1798.

Foster, M. L.: Toxic Amblyopia due to Tobacco, *Arch. Ophthal.*, July, 1913.

Friedmann, A. C. H.: Tobacco Poisoning, *Interstate Med. Jour.*, March, 1903; abstr., THE JOURNAL, April 11, 1903, p. 1027.

Larrabee, R. C.: Tobacco and the Heart; read before the Massachusetts Medical Society, June 9-10, 1903; abstr., THE JOURNAL, July 4, 1903, p. 50.

White, J. A. Henton: Some Effects of Tobacco, *Birmingham Med. Rev.*; abstr., THE JOURNAL, Jan. 30, 1904, p. 325.

Bamberger, J.: Hygiene of Cigar-Smoking, *München. med. Wchnschr.*, 1904, li, No. 30; abstr., THE JOURNAL, Sept. 3, 1904, p. 706.

Delie: Tobacco and Audition, *Rev. hebd. de Laryng.*; abstr., THE JOURNAL, May 13, 1905, p. 1551.

Arneld, M. B.: Effect of Tobacco-Smoke on Pathogenic Micro-Organisms, *Lancet*, London, May 4, 1907; abstr., THE JOURNAL, June 1, 1907, p. 1904.

Amerson, Sullivan, S. S.: Poison in Cigarettes, *Kentucky Med. Jour.*, August, 1907; abstr., THE JOURNAL, Aug. 17, 1907, p. 625.

Chilcott, W. L.: Effects of Tobacco, *Jour. Kansas Med. Soc.*, March, 1908; abstr., THE JOURNAL, May 2, 1908, p. 1459.

Bosl, A.: Different Technics for Experimental Research on Effects of Tobacco-Smoke, *Riforma med.*, 1909, xxv, No. 31.

Tobacco-Smoking and Circulation, editorial, THE JOURNAL, Feb. 7, 1914, p. 461.

Von Frankl-Hochwart, L.: Die nervösen Erkrankungen der Tabakraucher, *Deutsch. med. Wchnschr.*, 1911, xxxvii, 2273, 2321.

Pel: Un cas de psychose tabagique, *Ann. med. chir.*, 1911, xix, 171.

Ferran: De l'action du tabac sur l'audition, *Rev. méd. de Normandie*, 1911, p. 363.

Danis: Traitement de l'amblyopie nicotinique par la lécithine, *Progrès. méd. belge*, 1912, xiv, 11.

Clerc, A., and Pezzi, C.: Action de la nicotine sur le cœur isolé de quelques mammifères, *Compt. rend. Soc. de Biol.*, 1912, lxxii, 316.

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Heffenbower, R. C.: Toxic Amblyopia Caused by Alcohol and Tobacco, *Eclect. Med. Jour.*, 1912, lxxii, 167.
Bailey, T.: Tobacco: Its Effects, *Jour. Iowa State Med. Soc.*, 1911-1912, i, 55.
Gilfillan, J. S.: Effect of Tobacco-Smoking on Cardiovascular System, *St. Paul Med. Jour.*, July, 1912.
Mouriquand, G., and Bouchut, L.: Angina Pectoris and Tobacco, *Arch. d. mal. du Coeur*, October, 1912.
Effect of Tobacco on the Heart, Therapeutics, THE JOURNAL, March 15, 1913, p. 828.
Flessinger: Angina Pectoris Due to Tobacco, read before the Paris Académie de médecine; abstr., THE JOURNAL, May 10, 1913, p. 1473.
Goodhart, S. P.: Amnesias of Tobacco and of Malarial Origin, THE JOURNAL, Dec. 27, 1913, p. 2297.
Pack, F. J.: Smoking and Football Men, *Pop. Sc. Month.*, 1912, lxxxi, 336.

TOTAL AND DIFFERENTIAL LEUKOCYTE COUNTS

To the Editor:—A and B are discussing the relative value of a differential white count and a simple white count. A says that the "differential" is all-important, presents the true picture and tells whether an acute septic condition is present or absent. B admits its value, but says that when malaria and the primary anemias are excluded and in cases which clinically present some acute surgical condition, then a plain white cell-count is sufficient and should be the routine measure. He quotes Murphy's December, 1913, "Clinics" to help his argument. F. R. W.

ANSWER.—As a rule in surgical conditions an increase of leukocytes above the normal will be composed mainly of the polymorphonuclears and hence may be interpreted as indicating a reaction against infection. In such cases a total number of leukocytes affords a fair inference as to the activities of the immunizing power of the organism. In other cases, however, the character of the leukocytes, as shown by the differential count, is the important factor in forming a judgment as to the disease present. Thus, in lymphatic leukemia, the number of white blood-cells may be very much reduced by treatment or otherwise, but the differential count may still show a marked predominance of lymphocytes, which indicates that the nature of the blood-picture has not changed, and in such case the disease could not be regarded as cured although the number of white blood-cells is reduced to normal or below. In order, therefore, to secure the fullest information from the counting of leukocytes, both a total and a differential count should be made.

TREATMENT OF CHLOASMA UTERINUM

To the Editor:—1. What are the approved methods of treating chloasma uterinum?

2. What results are obtained by the use of electricity or carbon dioxid snow and how are these agents used in the treatment of this disease? W. F. RYAN, M.D., Lowell, Mass.

ANSWER.—1. The treatment of chloasma uterinum should be a treatment of the uterine disease on which it depends. Locally, various preparations have been advised for application to the pigmented area. Most of these employ mercuric chlorid. A number of formulas for solutions and ointments containing this remedy may be found in works on dermatology. Instead of corrosive sublimate, salicylic acid may be used, 1 or 2 parts in paste or powder to 20 parts of base.

2. We find no reference to the use of electricity in the treatment of this affection. Carbon dioxid snow is not usually recommended. R. Bernstein ("Solidified Carbon Dioxid," p. 41), recommends a light application for from ten to twenty seconds without repetition. He states that there was no resulting marking of the skin of any kind whatsoever.

ARTICLES ON SURGERY OF THE MASTOID

To the Editor:—Please tell me where I can get some of the latest literature on mastoid surgery.

S. R. EDWARDS, M.D., Calumet, Mich.

ANSWER.—The following is a list of recent articles on this subject:

Phillips, W.: After-Treatment of Radical Mastoid Operation, with Special Reference to Subject of Packing, *Laryngoscope*, March, 1912.
Lewis, E. B.: Cellular Changes During and After Acute Mastoiditis, with a Consideration of the Inadvisability of Certain Operative Procedures at Present Largely in Vogue. THE JOURNAL, Sept. 21, 1912, p. 1142.
Welty, C. F.: Improved Technic of the Thiersch Graft Following the Radical Ear Operation, THE JOURNAL, Sept. 16, 1911, p. 962.
Blumenthal, A.: The Question of Primary Suture after Mastoid Operation, *Deutsch. med. Wchnschr.*, Jan. 18, 1912.
Brown, H. B.: Treatment of Mastoid Wound Following Operation, *Ann. Otol., Rhin. and Laryngology*, December, 1911.
Fraser, J. S., and Dickie, J. K. M.: Analysis of 123 Consecutive Cases in Which Operations Were Performed for Mastoid, Labyrinthine and Intracranial Complications of Suppurative Otitis Media, *Jour. Laryngol., Rhinol. and Otol.*, March, 1912.
Ross, T. W.: Scarlet Red as Dressing After Radical Mastoid Operation, *Journal Laryngol., Rhinol. and Otol.*, April, 1913.
Richards, G. L.: So-Called Conservative Mastoid Operation with Description of Technic of Heath, Bondy and Siebenmann, *Ann. Otol., Rhinol. and Laryngol.*, September, 1911.
Cott, G. F.: One Hundred Radical Mastoidectomies, *Buffalo Med. Jour.*, December, 1911.
Oppenheimer, S.: Pro and Con of Maintenance of Retro-Auricular Opening after Radical Mastoid Operation, *Med. Rec.*, New York, November 30, 1912.
Hastings, S.: Indications of Mastoid Operation, *Practitioner*, London, November, 1912.
Wood, J. W.: After-Treatment of Mastoid Operations, *Ann. Otol., Rhinol. and Laryngol.*, September, 1913.
Loughran, R. L.: Radical Mastoid Operation, *New York Med. Journal*, Dec. 21, 1912.
Milligan, W.: Technic and After-Treatment of Radical Mastoid Operation, *Brit. Med. Jour.*, Sept. 20, 1913.
Amberg, E.: Facial Paralysis Complicating Suppurative Otitis Media: Atypical Mastoid Operation, *New York Med. Jour.*, July 6, 1912.
Bryant, W. S.: Modified Radical Mastoid Operation for Cure of Otitis Media Purulenta Chronica, *Med. Rec.*, New York, Nov. 16, 1912; Protective Mastoid Operation: An Operation of Election, *Surg., Gynec. and Obst.*, December, 1913.
Ingersoll, J. M.: Operative Findings and Results in Mastoiditis, *Ann. Otol., Rhinol. and Laryngol.*, September, 1913.
Hammond, P.: Technic in After-Cure of Radical Mastoid Operation, *Ann. Otol., Rhinol. and Laryngol.*, September, 1913.
Mehl, G.: Operative Treatment of Acute Mastoiditis, *Presse méd.*, Nov. 29, 1913.

STATES WHICH RECIPROCATE WITH NEW YORK

To the Editor:—What states accept a New York license to practice medicine in lieu of a written examination? M. S.

ANSWER.—Delaware, Indiana, Michigan, New Jersey, Ohio, Utah and Wisconsin have reciprocal relations with New York. California and Colorado, however, accept the license of any state if the candidate's qualifications are otherwise satisfactory.

ARTIFICIAL PNEUMOTHORAX

To the Editor:—Please refer me to literature on artificial pneumothorax. H. J. CORDIER, M.D., Celina, Ohio.

ANSWER.—A list of literature on this subject was published in THE JOURNAL, Dec. 27, 1913, p. 2313.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

RETARDATION OF AMERICAN SCHOOLCHILDREN AND ITS REMEDY

In an address on this subject before the Schoolmasters' Association of New York, Dr. Charles L. Dana opposed the idea that the work imposed on boys in the schools caused nervous or mental breakdown. He recalled but one boy who broke down from study in the secondary schools, and in this instance weak eyes constituted the main trouble. He insisted, on the contrary, that not sufficient work was required, and too short time was devoted to study courses. On the question of what our system of education accomplishes, he said that the American schoolboy up to the age of 10 is apparently equal in equipment to the schoolboy of the same age in England, France and Germany, but when he reaches the age of 12 he is decidedly behind him, and when he reaches the age of 15 or 16 he is nearly two years behind. Dr. Dana quoted Mr. Burt in the *Independent* and Professor Perkins in the *Yale Review*, October, 1913, to the effect that the American schoolboy somewhere between the ages of 10 and 16 loses two years as compared with his brother of Europe. This, he said, is conceded by the National Council of Education, and it agrees with Dr. Dana's experience. His discussion referred chiefly to the work in the secondary or private schools, which he said constituted the one bright spot in our educational system between the dawdling and uncertain policies of the elementary schools and the crudity and foolishness of the American college. These boys in the secondary schools, thus

retarded, were not only broken down, they were not even educated, the function of the secondary school apparently being only to fit boys for an American college, in contrast to the real work of the English public schools, the gymnasium of Germany and the lycées of France. As according to the Binet-Simon tests children three years behind in mental age are regarded as feeble-minded, Dr. Dana asks, "Are not our boys at 18 dangerously near fatcity?" He adds, "Since in an American college this mental retardation is not lessened, but as a rule increased, it follows (what many of us have long guessed) that our American graduates belong to the feeble-minded classes as measured by the B.-S. or other intelligence tests."

The National Council of Education, after long study, explains in a recent report that the inferiority of our school-children is due to the fact that the foreign pupil begins many subjects earlier, such as foreign languages, science and history; that the teacher exercises greater care of the pupils as individuals; and that there is the absence of marks and examinations, and finally a greater length of the school year. The council recommends that greater emphasis should be placed on moral training for better citizenship and a better and smaller selection of subjects and more thorough and scientific instruction in them. Dana points out that the council does not lay stress on the need of intensive study by the pupil or on the shortness of the school year, which to him are the vital points.

The American school year has from 900 to 1,000 school hours—from 185 to 200 school days of five hours each—while the German school is 1,400 hours, 270 days, five, five and a half or even six days a week. The same is true in France and England. This short American school year is often still shorter in the secondary schools, in instances hardly more than 150 days. The European boy at the age of 10 is made to work steadily and intensively. The American boy can do it if he chooses, but is under no compulsion; hence retardation, lack of interest and superficiality. He believes that this is brought about by a sort of sickly sentimentality toward the growing boy on the part of American parents. The idea is prevalent that study is a dangerous thing for a boy, and that hard mental work should be given him under the most careful conditions.

This idea, Dr. Dana believes, is entirely wrong; mental work is not only healthful for a growing child, but it is absolutely beneficial. Nothing is so important for him as to be impelled to do hard work and to finish thoroughly a given task. If he works with the idea that he should stop the minute the sensation of ennui comes on him he will never be thorough or effective. He should, of course, work wisely. The brain is the best protected organ of the body. This organ and all its tissues rests one-third of the day, while all the other organs, even the muscles, are doing some work every hour. The brain receives more blood per cubic centimeter than any other organ, and is protected physiologically against overwork by the feeling of ennui; more than any other organ it responds to exercise and training and has within it more potentialities of development than any other tissue. Given a healthy child, working and living in proper surroundings, there is really no limit to the mental work which can be obtained from him by judicious pedagogics. The European idea is that after the age of 10 a child is able to do hard work and ought to do it. The American idea is that it is able to do some work and ought to be persuaded to do it.

Dr. Dana endorses the general plan of the National Council of Education that the child shall finish his elementary education at 12; between 12 and 16 he shall be advanced so that at 16 he is able to enter a vocational school where he will finish his education at the age of 20; or he will enter a small college and finish his training in the arts; or he will enter a regular college at 18, being so equipped that he will finish the liberal course in two years and begin his professional course in medicine or law at 20 and graduate at 24. This work must be initiated in the elementary schools, but a large part of it must be done in the high schools and preparatory schools.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, April 7. Sec., Dr. John Wix Thomas, Phoenix.
COLORADO: Denver, April 7. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.
IDAHO: Wallace, April 7. Sec., Dr. John F. Schmershall, Jerome.
MINNESOTA: Minneapolis, April 7-10. Sec., Dr. Thomas McDavitt, 814 Lowry Bldg., St. Paul.
MONTANA: Helena, April 7. Sec., Dr. Wm. C. Riddell, Helena.
NEW MEXICO: Santa Fe, April 13. Sec., Dr. W. E. Kaser, East Las Vegas.
OKLAHOMA: Oklahoma City, April 14. Sec., Dr. John W. Duke, Guthrie.
RHODE ISLAND: Providence, April 2. Sec., Dr. Gardner T. Swarts, Room 315, State House, Providence.
UTAH: Salt Lake City, April 6-7. Sec., Dr. G. F. Harding, 403 Templeton Bldg., Salt Lake City.
WEST VIRGINIA: Charleston, April 21. Sec., Dr. S. L. Jepson, 81-12th St., Wheeling.

STATES REQUIRING HIGHER PRELIMINARY EDUCATION

An official communication states that after Jan. 1, 1915, the Arkansas State Medical Board will require all students entering on the study of medicine in that state to have completed one year of college work, including courses in physics, chemistry, biology and a modern language, in addition to a standard four-year high-school education. This requirement will apply to all applicants for licenses granted by this board giving the right to practice medicine in Arkansas who graduate in 1919 and thereafter.

There are now sixteen states which have adopted requirements of preliminary education in addition to a standard four-year high-school education. These states, the number of college years required and the time the higher requirement becomes effective are as follows:

State Examining Board of—	No. of Years Required	Affects Students Matriculating	Affects All Applicants
Minnesota	2	1908-09	1912
North Dakota	2	1908-09	1912
Colorado	2	1910-11	1914
Connecticut	1	1910-11	1914
Kansas	1	1910-11	1914
Indiana	2	1910-11	1914
Utah	1	1910-11	1914
Iowa	2	1911-12	1915
South Dakota	2	1911-12	1915
Vermont	1	1912-13	1916
Pennsylvania	1	1913-14	1917
Kentucky	2	1914-15	1918
Michigan	1	1914-15	1918
Rhode Island	1	1914-15	1918
Arkansas	1	1915-16	1919
California	1	1915-16	1919

Kansas June Report

Dr. H. A. Dykes, secretary of the Kansas State Board of Medical Registration and Examination, reports the written examination held at Topeka, June 10-12, 1913. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 82, including one who had been previously licensed without examination, of whom 78 passed, including the candidate previously licensed, and 4 failed. Seventeen candidates were licensed through reciprocity. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
University of Arkansas	(1913)	78
Chicago College of Med. and Surg	(1912) 78; (1913)	75.6, 79, 84.6, 86.
Hahnemann Med. College and Hosp., Chicago	(1913)	84
Rush Medical College	(1913)	83
Kansas Medical College	(1913) 75, 75, 75, 75, 75, 76, 76.5, 78.9, 79, 79, 80, 80, 80, 81, 81, 81.8, 81.8, 84, 84, 85, 85, 89.8.	
University of Kansas	(1913) 76, 79, 81, 83, 83, 84.8, 86.	
University of Louisville	(1913)	86.9
Flint Medical College	(1904)	75
Ensworth Medical College	(1913)	75
Kansas City Hahnemann Medical College	(1910) 80.9; (1913) 77, 80, 82, 84.	
St. Louis University	(1913) 77, 80	
University Medical College, Kansas City	(1913) 76, 76.6, 76.9, 77, 79, 79, 79, 81, 81, 81, 81.9, 82, 83, 83, 83, 83, 84.9, 85, 85, 85, 87, 87.	

Columbia Univ., Coll. of Phys. and Surgs., N. Y.	(1913)	83
Long Island College Hospital	(1908)	83

Meharry Medical College (1913) 75, 76, 77, 79, 80, 84.8.

FAILED

American Medical College	(1911)	67.5
Ensworth Medical College	(1909)	45.9
University Medical College, Kansas City	(1913)	70
University of Tennessee	(1913)	72.6

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Chicago College of Medicine and Surgery	(1912)	Illinois
College of Physicians and Surgeons, Chicago	(1911)	Illinois
State University of Iowa, College of Medicine	(1908)	Illinois
Kansas Medical College	(1898)	Nebraska
University of Kansas	(1911)	Missouri
Hospital College of Medicine, Louisville	(1906)	Kentucky
Barnes Medical College	(1901)	Missouri
Columbian Medical College, Kansas City	(1900)	Missouri
Ensworth Medical College	(1911)	Nebraska
University Medical College, Kansas City (1910) Missouri; (1911) Missouri; (1912) Missouri.		
John A. Creighton Medical College	(1912)	Nebraska
Eclectic Medical College of New York City	(1891)	Nebraska
Western Reserve University	(1903)	Ohio
Meharry Medical College	(1911)	Virginia

South Carolina June and November Reports

Dr. A. Earle Boozer, secretary of the State Board of Medical Examiners of South Carolina, reports the written examinations held at Columbia, June 10 and Nov. 11-13, 1913. At the June examination the number of subjects examined in was 13; total number of questions asked, 105; percentage required to pass, 75. The total number of candidates examined was 121, including 5 osteopaths, of whom 81 passed, including 4 osteopaths, and 40 failed, including 1 osteopath. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Howard University (1912) 75.9, 78, 81.6.		
Atlanta College of Physicians and Surgeons (1908) 75; (1913) 76.5, 77.2, 78.7, 83.9, 86.6.		
Atlanta School of Medicine	(1913)	75, 79.4
University of Georgia (1911) 75.4; (1913)		81.4, 91
Baltimore Medical College (1911) 88.2; (1913)		85.6
College of Physicians and Surgeons, Baltimore	(1910)	80.2
Johns Hopkins University (1904) 85.2; (1910)		89.5
University of Maryland (1910) 83.5; (1913) 83.2, 83.4,		84.2, 87.1
College of Physicians and Surgeons, Boston	(1912)	75.6
University of Michigan, College of Med. and Surg.	(1911)	82.9
Albany Medical College	(1912)	87
Columbia Univ., Coll. of Phys. and Surgs., N. Y.	(1913)	90.5
Leonard Medical School (1913) 76.6, 79.3, 79.4.		
North Carolina Medical College	(1913)	77.5
Jefferson Medical College	(1913)	86.2, 89.2
Medico-Chirurgical College of Philadelphia	(1906)	79
University of Pennsylvania	(1912)	86.1
Woman's Medical College of Penna. (1899) 81; (1911)		84.1
Medical College of State of South Carolina (1911) 75; (1912) 75.5, 75.9, 77.2, 77.4, 79.5; (1913) 75.1, 77, 77.4, 77.9, 78, 78.2, 78.5, 78.6, 79.4, 79.5, 79.5, 79.7, 80.2, 80.4, 80.6, 80.9, 80.9, 81.4, 82.1, 83.1, 84, 84.4, 84.7, 85.5, 86.6, 87, 92.1, 92.5.		
Lincoln Memorial University	(1912)	75.1, 82.4
Meharry Medical College	(1912)	77.4, 78.5
Vanderbilt University	(1913)	84.7

FAILED

College	Year Grad.	Per Cent.
Atlanta College of Physicians and Surgeons (1913) 62, 62.8, 71.9.		
Atlanta School of Medicine	(1913)	69.4
Georgia College of Eclectic Medicine and Surg.	(1913)	64.5
South. Coll. of Med. & Surg., Atlanta (1912) 66.4; (1913)		28.4
University of Georgia (1911) 64.9; (1912) 57; (1913)		70.8
Chicago College of Medicine and Surgery	(1913)	75*
Indiana University	(1909)	45.5
University of Louisville	(1911)	64.9
Maryland Medical College	(1905) †; (1912)	72.5
University of Maryland	(1897) 67.9; (1909)	70.2
Leonard Medical School (1905) 64.8; (1906) 74.6; (1910) 72.9; (1912) 41; (1913) 71.9, 75.9.‡		
North Carolina Medical College	(1912)	65.8
Medical College of State of South Carolina (1908) 70.4; (1909) †; (1911) 62.1, 69.6; (1912) 66.8; (1913) 61.8, 62.9.		
Meharry Medical College	(1909) 71.5; (1911)	65.8
Memphis Hosp. Med. Coll.	(1911) 51.8, 52.5; (1913)	59.8
University of West Tennessee	(1913)	43.9, 60.5
Gate City Medical College§	(1909)	68.6

* Could not fulfil requirements.
† Examination not completed.
‡ Fell below 60 in one subject.
§ This school was caught selling diplomas in 1911; its dean was convicted and sentenced to fifteen months' imprisonment.

At the examination held Nov. 11-13, 1913, the number of subjects examined in was 13; total number of questions asked, 105; percentage required to pass, 75. The total number of candidates examined was 45, including 1 osteopath, of whom 23 passed, including 1 osteopath, and 22 failed. Four candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Un'versity of Alabama	(1913)	82.6
Atlanta College of Physicians and Surgeons	(1913)	75.1
Atlanta School of Medicine	(1910)	78.8
University of Georgia	(1913)	75.2
Chicago College of Medicine and Surgery	(1913)	77.4
University of Louisville	(1911)	75.6
Maryland Medical College	(1912)	79.1
University of Maryland	(1897)	78.5
Boston University	(1913)	82.1, 82.4
College of Physicians and Surgeons, Boston	(1913)	78
Leonard Med. School (1906) 77.8; (1910) 76.5;	(1913)	78.1, 78.2
North Carolina Medical College	(1913)	75.6, 75.9
Med. Coll. of State of S. Carolina (1908) 76.5;	(1912)	76.4, 79.8
University of Virginia (1911) 80.5;	(1912)	75

FAILED

College	Year Grad.	Per Cent.
South. Coll. of Med. & Surg., Atlanta (1912) 71.8;	(1913)	55.5
Indiana University	(1909)	69.1
Maryland Medical College (1905) *;	(1912)	66.6
Leonard Medical School (1912) *;	(1913)	69.6
North Carolina Medical College (1903)*;	(1912)	68.9, 69.2
Jefferson Medical College	(1898)	72.2
Med. Coll. of State of S. Carolina (1911) 62.4;	(1913)	70.8, 71.2
Meharry Medical College (1909) *; (1911) 63.1; (1913)		*
Memphis Hospital Medical College (1911) *;	(1913)	56
University of West Tennessee	(1913)	54.1
Vanderbilt University	(1899)	67
Gate City Medical College†	(1909)	64.5

* Examination not completed.
† This school was caught selling diplomas in 1911; its dean was convicted and sentenced to fifteen months' imprisonment.

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
College of Physicians and Surgeons, Baltimore	(1912)	W. Virginia
Johns Hopkins University	(1912)	Maryland
University of Maryland	(1912)	Maryland
University of Pennsylvania	(1902)	W. Virginia

Idaho October Report

Dr. J. F. Schmershall, secretary of the Idaho State Board of Medical Examiners, reports the written examination held at Boise, Oct. 7, 1913. The number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 75. The total number of candidates examined was 17, of whom 13 passed and 2 failed. Two candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Loyola University Med. Dept.	(1880)	80
Chicago College of Medicine and Surgery	(1913)	79.6
Northwestern University Medical School	(1904)	89
Rush Medical College	(1894)	77.5
Medical College of Indiana	(1905)	85
Johns Hopkins University	(1910)	82.8
University of Michigan (1882) 91;	(1903)	91
University of Oregon	(1908)	76.7
Willamette University	(1877)	93
Medico-Chirurgical College of Philadelphia	(1913)	81.7
Vanderbilt University (1912) 77.6;	(1913)	83.2

FAILED

College	Year Grad.	Per Cent.
Jenner Medical College	(1897)	69.9
Ensworth Medical College	(1908)	72

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Rush Medical College	(1900)	Utah
St. Louis University	(1909)	Utah

Ohio January Reciprocity Report

Dr. George H. Matson, secretary of the Ohio State Medical Board, reports that 21 candidates were licensed through reciprocity, Jan. 6, 1914. The following colleges were represented:

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
George Washington University	(1912)	Dist. Colum.
College of Physicians and Surgeons, Chicago	(1887)	Iowa
Hahnemann Medical College and Hosp., Chicago	(1910)	Illinois
Chicago Medical College	(1900)	Illinois
Northwestern University	(1907)	Illinois
Indiana University	(1908)	Indiana
University of Louisville	(1912)	Kentucky
Baltimore Medical College	(1898)	New York
Johns Hopkins University	(1912)	Wisconsin
University of Maryland	(1897)	W. Virginia
University of Michigan (1910) Michigan; (1912) Michigan; (1913) Michigan.		
Cornell University	(1908)	New York
University of Buffalo	(1903)	New York
Jefferson Medical College	(1912)	Maryland
University of Pennsylvania	(1911)	New Jersey
University of Pittsburgh (1908) Pennsylvania; (1912) Pennsylvania; (1913) Pennsylvania.		W. Virginia
University of Vermont	(1912)	Vermont

Book Notices

AN INTRODUCTION TO THE HISTORY OF MEDICINE WITH MEDICAL CHRONOLOGY, BIBLIOGRAPHIC DATA AND TEST QUESTIONS. By Fielding H. Garrison, A.B., M.D., Principal Assistant Librarian, Surgeon General's Office, Washington. Cloth. Price, $7.50 net. Pp. 763, with illustrations. Philadelphia: W. B. Saunders Company, 1913.

This interesting and in many respects novel history of medicine begins with a discussion of the identity of all forms of ancient and primitive medicine, which are shown to differ only in unimportant details. Then come chapters on Egyptian, Sumerian and Oriental and Greek medicine; on the medicine of the Byzantine, Mohammedan and Jewish periods, the medieval period, the Renaissance and the seventeenth, eighteenth, nineteenth and twentieth centuries. In addition to the usual data, which are presented in a most pleasing manner, special attention is given to the social and cultural aspects of medicine in the various periods. About half of the text is devoted to the modern period, that is, from the beginning of the nineteenth century to the present time. At the end are appendixes covering medical chronology, bibliographic notes for collateral reading, and a list of test questions. The latter are certain to awaken interest, as an attempt to answer them will reveal how very little most of us really know of medical history. There are complete indexes of subjects as well as of names. Most attractive are the many portraits which have been selected with great care, the biographic data and the luminous characterizations of the leaders in medicine of the different periods.

As stated, the modern period is treated very fully, and American conditions and physicians receive due consideration. Perhaps there is room for the remark that the Middle and Western parts of this country are not so well represented as the Eastern. One wonders, for instance, why no mention is made of men like Daniel Brainerd and Christian Fenger, and very little is said about the development of the medical institutions in these regions. On the other hand, when one considers the wealth of facts printed, the wonder is that so few serious mistakes and omissions have been made. While compact and crowded with facts, every page illustrating the learning and accuracy of the author, it is in no sense a dull book but pleasant reading throughout, clear and concise, rich in happy phrases, apt quotations, with occasional flashes of humor, and many historical and cultural allusions. It has the "genuine flavor of letters," inspires interest in its subject and merits the widest popularity.

THE AMERICAN ENCYCLOPEDIA AND DICTIONARY OF OPHTHALMOLOGY. Edited by Casey A. Wood, M.D., C.M., D.C.L., Professor of Ophthalmology, College of Medicine, University of Illinois, Assisted by a Large Staff of Collaborators. Volume II. B to Cataract, Incipient. Cloth. Price, $6. Pp. 729-1505, with illustrations. Chicago: Cleveland Press, 1913.

The character of the encyclopedia as established in the first volume is well sustained in the succeeding portion of this ambitious work. The article by McKee on the bacteriology of the eye and by Beard on blepharoplasty are among the leading and valuable articles in this volume. The articles on the brain and brain tumor by Halstead are of exceeding interest; they represent a comparatively recent extension of the field into which the ophthalmic surgeon must eventually become more actively interested in his surgical work, so that it should be well covered in a book of this character. Two interesting articles of considerable length are those on the blind and on the prevention of blindness, and on the comparative anatomy and histology of the eyes of birds. The former article, in addition to a discussion statistical and otherwise of the usual causes of blindness, takes up the prevention of blindness in industrial pursuits by means of protective glasses, protecting devices for machines, etc. It requires some effort to adjust oneself to the idea of an encyclopedia made up largely of signed monographs with the constantly recurring personal pronoun and expression of opinion and discussion of theory rather than plain, dogmatic statement. Encyclopedic medical biography which contains description of dress, anecdote, quotation and classical allusion are also unusual. The quotation of a portion of one of Dr. Weir Mitchell's novels to illustrate a point is likewise an innovation in encyclopedic medical literature. The editor has anticipated a criticism in regard to the dictionary feature of the work when he says in his introduction to the first volume that the setting forth of so many foreign words might be regarded as padding. It is said that many foreign words which have equivalents in English which are very similar in form have been omitted. It is believed that many more might have been omitted without detriment, especially the words, of which there are not a few, which seem to have no connection with ophthalmology. This applies also to the description or mention of certain bacteria with no reference to their rôle in ophthalmic pathology. The monographs are for the most part excellent and informing. A few of the contributors seem not to have caught the spirit of scientific enthusiasm which forms the key-note of the work, but on the whole the second volume, with its abundant illustrations, forms a worthy part of this monumental and representative American book on ophthalmology.

SPÄTPSYCHOSEN KATATONER ART. Eine klinische Studie. Von Dr. Maurycy Urstein, Warschau. Paper. Price, 18 marks. Pp. 440. New York: Rebman Co., 1913.

Under the title "Late Catatonia" the author classifies cases of catatonia which begin in the fifth and sixth decades: that period of life when regressive changes first become marked. Late catatonia does not differ essentially in its clinical manifestations from catatonia developing in early years. It is much more frequent in women than in men. The influence of the menopause, woman's entrance into the period known to be dangerous, loss of her sexual functions, and the changes in the internal secretions of the ovaries, all have a power to affect her mentally. The physical diseases and discomforts which come to many women at this time increase the mental distress. The degree of distress depends largely on the character of the mind acted on. This in turn is strongly influenced by the character of the woman's earlier life: the success of her marriage, freedom from too much stress and strain, etc.

Those traits in the younger woman which lead her to be considered as eccentric, jealous or emotionally unstable are apt, under the strain of the menopause, to develop to such a degree as to constitute an actual psychosis. Psychoses which in earlier life are of the hebephrenic, paranoiac or circular type, are apt, with the menopause, to take on a catatonic type. The author advances the theory that the *Geschlechtszellen*, the cells of the sex-organs, produce a hormone whose absence causes a disturbance of the general organism.

An interesting chapter is that which treats of the relation between age and the forms of psychoses: a psychosis developing at any age is colored by the psyche peculiar to that age. A most valuable part of the book is that which gives the descriptive histories of the forty cases that are cited in full. The reader is given an excellent insight into the material which the author uses to develop his theories. The book is a valuable addition to the literature of the psychoses.

TUMOURS. By Charles Powell White, M.D., F.R.C.S., Director, Pilkington Cancer Research Fund. The Pathology of Growth, Vol. I. Cloth. Price $3.50 net. Pp. 235, with 88 illustrations. New York: Paul B. Hoeber, 1913.

From the title page one gains the impression that this book constitutes the first volume of a series of text-books of pathology, edited by A. E. Boycott; but no definite statement to this effect is forthcoming. The volume contains a concise discussion of the subject of tumors, both as to their general characters and their special forms. There is no consideration of their clinical features, their general effects on the individual, or their relation to different viscera. The amount of information given in a small space is large, and it is reliable. Perhaps the best chapter is on the etiology of tumors, which is to be recommended for its sanity. No attempt is made to inspire the student to independent thinking or research, or to lead him to do outside reading. The illustrations are practically all from photomicrographs, and it is doubtful if, in most instances, they will be very enlightening to the inexperienced student, for whom the book is evidently intended.

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Miscellany

The Present Status of Tuberculin

In the Transactions of the British National Association for the Prevention of Consumption and Other Forms of Tuberculosis (Great Britain), appears the report of a symposium on tuberculin held at the fifth annual conference of the association. Among those participating in this symposium were Hector W. G. Mackenzie, G. Sims Woodhead, Lydia Rabinowitsch-Kempner, Edmond Béraneck, Sahli, Nathan Raw, William Charles White, Noel D. Bardswell, Sir James K. Fowler, Sir R. W. Philip, Sir St. Clair Thomson, E. Rist, John Rennie, O. Amrein and Pannwitz. Although the discussion presented a variety of opinions on some points, there was a close agreement on several phases of the subject. The more important topics are here briefly presented:

LACK OF EXPERIMENTAL EVIDENCE

It is a remarkable fact that notwithstanding the great scientific genius of its discoverer, tuberculin has never been placed on a scientific basis through satisfactory experimental results. This has been pointed out by Batty-Shaw (The Present Evidence for and against the Use of Tuberculins as a Specific Cure, *Brit. Med. Jour.*, May 3, 1913, p. 921) and is confirmed by Rabinowitsch and Mackenzie. Mackenzie states that Koch passed over the action of tuberculin in animals and afterward dwelt on its extraordinary effects in tuberculosis in man. He asks whether any one has been able to obtain the cure by means of tuberculin injections of the tuberculous ulcer occurring at the site of the primary inoculation puncture. Rabinowitsch refers to this question and states that the majority of reports bearing on the treatment of experimental tuberculosis by tuberculin are unfavorable. It is well known that large doses of tuberculin will kill tuberculous guinea-pigs promptly. Rabinowitsch used small doses, beginning ten days after the infection of the animals. From the results as a whole, it was evident that no curative influence had been exercised by the tuberculin. The control animals sometimes lived longer than the treated animals.

TUBERCULIN REACTION ACCOMPANIED BY BACILLI IN THE BLOOD

Rabinowitsch also made the important discovery that tuberculin sufficient to produce a general reaction causes virulent tubercle bacilli to enter the blood and thus tends to disseminate the disease. This finding is confirmed by the observations of Bachmeister on human subjects. In four out of fifteen cases, blood, taken from patients at the height of the feverish reaction following the diagnostic use of tuberculin, produced tuberculosis in animals injected with it. The blood of each of the four patients taken before the use of tuberculin gave negative results when injected. It is evident that much caution should be used in the employment of tuberculin even for diagnostic purposes.

Rabinowitsch thinks that tubercle bacilli may be caused to enter the blood-stream not only by the injection of tuberculin, but also by the use of chemotherapeutic preparations. It appears that the most diverse irritants, when acting on the tuberculous organisms, favor the entrance of bacilli into the circulation.

DIFFICULTY OF INTERPRETING THE CLINICAL EVIDENCE

The determination of the clinical usefulness of tuberculin has proved especially difficult. Mackenzie, after a considerable experience, still feels uncertain as to its value. In his opinion it is still on trial. He says, "When all is said and done, we have to acknowledge that the results of it are not brilliant, certainly not convincing."

In various papers, conclusions from clinical experience are expressed with a varying degree of confidence. Some are quite enthusiastic, others very conservative. As an illustration of the difficulty of estimating the curative influence of tuberculin, Bardswell says, "The good effect of tuberculin is at best exerted almost imperceptibly, and over a long period, the slowness of its action being such that it is often difficult to determine, as regards patients under the most favorable and hygienic conditions, how much, if any, of the improvement that takes place is due to its use." Further, he says, "Tuberculin cannot be looked on as a means whereby an unfavorable case can be converted into a favorable one, or as likely to turn the scale in the patient's favor when his progress is hesitating or definitely retrogressive. More often than not it will do harm."

In some cases results more favorable than those obtained in ordinary sanatorium cases were reported; but these results were in selected patients and there are no records of similarly selected patients under ordinary sanatorium treatment. The selection of cases favorable for tuberculin treatment and the exclusion of those less favorable, therefore, introduces a serious element of fallacy.

Rist says that he has "never seen a patient doing well under tuberculin without remaining in doubt whether he would not have done as well without tuberculin." He still gives it to some patients for a subjective effect.

PSYCHIC INFLUENCE

One reason for the better results obtained under tuberculin than under the ordinary sanatorium treatment alone may be found in the effect of psychic influence. Dr. Gebser says, "A great number of tuberculin successes seem to me to be explicable by psychologic processes. People who submit themselves to tuberculin treatment mostly feel well-disposed to it and also possess the necessary qualities of character to behave rationally; to this fact they for the most part owe their improvement in health."

UNFAVORABLE OPINIONS

Schudt, Henssen, Wolff and Brauer take a skeptical attitude as to the therapeutic value of tuberculin.

Thomson reports a most discouraging experience with this remedy in laryngeal tuberculosis. He says: "All that tuberculin appears to do or that one can allow that it may do is to slightly assist the promising cases. After all can its most enthusiastic supporters ever expect more of it? It is often referred to as a remedy by those of little understanding. We know it is no remedy."

In Thomson's opinion, so far as the larynx is concerned, tuberculin may do much harm in unskilled hands; in most cases its good effects are not obvious; in a few it may be helpful.

FAVORABLE OPINIONS

Rennie, Amrein and Morland speak favorably of the use of tuberculin in their experience.

Sims Woodhead maintains that tuberculin is a powerful agent, potent both for good and for evil, and must be used with great care. The only safe method of administering tuberculin treatment is to avoid all but minimal reactions. Otherwise it may do more harm than good. It has never yet conferred complete immunity to tuberculosis either in man or in animals.

SELECTION OF CASES

Without selection of cases tuberculin treatment is impossible. The susceptibility of various individuals to tuberculin varies, according to White, to such an extent that to produce the same effect in two individuals may require two hundred times as much tuberculin in one case as in the other. There are many cases in which it is distinctly contra-indicated.

While some authors contend that tuberculin treatment is not necessarily contra-indicated by fever, Rist insists that one must first exclude patients who are in a febrile condition. This class includes the great majority of the progressive cases. Rist has had no success with tuberculin in the non-febrile progressive cases in which he has used it.

Philip thinks highly of tuberculin, but its success, he believes, rests largely on the patient's potential of recovery. The hope of successful treatment is greatly enhanced if the lesion is local. For this reason surgical tuberculosis, and glandular and skin lesions give much better results with

this remedy than pulmonary tuberculosis. "In order that tuberculin may be effective, treatment must be begun sufficiently early. The defensive mechanism of the individual must still be capable of ready response to stimulation."

According to Woodhead, three main considerations are to be decided when we are doubtful as to whether or not we should use tuberculin:

1. Are the tissues well nourished and the functions well maintained.

2. Are bacilli already present and accessible in sufficient numbers to provoke the therapeutic reaction of the organism?

3. Is it safe to induce any lytic action on these bacilli in the present condition of the patient?

EFFECT OF LOCAL TUBERCULOSIS

Better results are usually obtained from tuberculin in the treatment of localized tuberculosis than from its use in general infections. Sahli says, "All localized tuberculosis is suitable for tuberculin treatment, provided that the patient's system is not already overloaded with tuberculin, and he is, therefore, too seriously ill."

According to Raw, "This valuable and powerful remedy gives us the best results in the treatment of tuberculous glands. The infection, being of bovine origin, requires for its treatment a tuberculin prepared from human bacilli, as more complete immunity seems to be produced in the human body by using opposite tuberculins."

Raw regards tuberculin as a remedy of the greatest value, especially in early cases and when the deposit of tubercle is localized, as in one apex of a lung or in a lymph-node or single joint; but when the tuberculosis is disseminated and complicated by secondary infections the use of tuberculin cannot be expected to be of much avail.

Philip says: "In proportion as the disease is localized the hope of successful treatment by tuberculin is increased. In a case of early tuberculous infection, when the process is limited to the lymphatic system, or in a case where, with further advance, the disease is still for the most part localized and the systemic disturbance is relatively slight, the well-regulated use of tuberculin affects the patient favorably and in many cases leads to cure."

Rist points out that tuberculin acts favorably on certain skin lesions, but is of little use in tuberculosis of the lungs.

TUBERCULIN IN GERMANY

In an appendix to the report Pannwitz, secretary of the International Antituberculosis Association, presents a summary of the views of prominent German specialists. According to Pannwitz, tuberculin is extensively used in Germany and is popular. He points out, however, that the number of doubters is increasing, and in evidence of this fact he notes that the search for new tuberculin preparations never ceases. A considerable number of the German specialists quoted express a favorable opinion and state that the hygienic sanatorium treatment combined with the use of tuberculin is more effective than the sanatorium treatment alone. When tuberculin injections are given, it is asserted that the patients are more easily controlled and especially can be persuaded to continue the treatment longer than if they are merely urged to continue simple hygienic and dietetic measures.

From reading these papers the following impressions are gained:

1. Tuberculin is not holding the position which was accorded to it after its recovery from the depression due to its early incautious use. It is not in itself curative, but it is, at most, a stimulant to the curative efforts of the organism. Some observers are still of the opinion that it is of value in selected cases of tuberculosis.

2. The potency of tuberculin for harm is recognized by all. Its administration requires careful selection of the case, close observation of the patient and appropriate regulation of the dose. Patients should be treated in a hospital, or, if the remedy is administered to ambulant patients, a strict control should be exercised.

3. Tuberculin is effective only in strictly localized forms of tuberculosis. Hence, the results are good in the forms of tuberculosis called surgical, such as affect the skin, bones, joints and lymph-nodes. Tuberculosis of the lungs, when strictly localized, would appear to indicate its use, but the different character of the tissue involved seems to render the results less favorable.

Full-Time Health Officers

The importance in local health administration and in the advancement of rural hygiene of the full-time county health officer is emphasized in an address by Dr. Louis I. Dublin before the state conference on health officers of Kentucky, printed in *Public Health Reports*, Jan. 2, 1914. After discussing the opportunity of Kentucky to employ full-time rural health officers on account of the even distribution of the population in the various counties, he summed up the need for, the qualifications and the opportunities of, full-time health officers as follows:

The health officer should be one whose sole interest is in the community to the exclusion of private interest. The occasion should no longer arise when a health officer may be tempted by personal considerations to neglect common needs. He should never find it necessary to compete with those whom it is his sworn duty to supervise. As to his qualifications, he should be well trained in the modern science of sanitation and public health. The average physician is not equipped to fill this office. The protection of the public health has now been conceived as a science with its own data and formulas. Special postgraduate courses are provided for the training of such men. Experience is also a good school for health officers, but ultimately provision should be made that health officers shall be holders of a diploma in public health. The tenure of office of such full-time health officers should be coextensive with efficient service. Every year of service makes them of greater value to the state, and the office should not be a pawn in the political game. They should be reasonably compensated for their services. It is folly to set high standards and to make them impossible of attainment through inadequate compensation or uncertainty of tenure of office. The salaries must be adequate to attract able men.

As to some of the problems of a full-time health officer in Kentucky, Dublin points out that in 1911 the death-rate from tuberculosis in Kentucky was 229.3 per hundred thousand, while in the registration states, which include the centers of investigation, the rate was 155.6 per hundred thousand. This would constitute one of the first problems of a full-time health officer, and a reduction of the death-rate from this disease to the average of the states in the registration area would save 1,700 lives annually in the state of Kentucky, largely of men and women in their prime whose money value to the state would be more than enough to compensate for the additional cost of the health work.

Another problem in Kentucky is the typhoid fever rate, which in 1911 was 46.3 per cent. as compared with 20.4 in the registration states. Typhoid fever to the health engineer is an unerring indication of a polluted water-supply, infected food products and unsupervised typhoid carriers, which are a constant menace to the entire state through milk and food-supply. The full-time health officer supported by the community would soon earn many times his cost in reducing the amount of typhoid. The activities of the full-time health officer would also include the reduction in the death-rate from preventable disease, which in 1912 in Kentucky amounted to 39.5 per cent. of the total death-rate, or 12,000 deaths and many more cases of sickness in the course of a year. Dublin further states that one of the most remunerative fields for the activity of the full-time health officer would be his active work in child hygiene, in cooperation with the school authorities. If there were no better excuse than the need for some local authority to carry on intelligent child hygiene work in each community, this would be sufficient for the appointment of full-time health officers, as it is during the period of child life that the foundation is laid for the physique which will determine largely the usefulness and longevity of the future citizens.

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Medicolegal

Waiver of Privilege Procured By Fraud

(Kloppenburg vs. Minneapolis, St. Paul & Sault Ste. Marie Railway Co. (Minn.), 143 N. W. R. 322)

The Supreme Court of Minnesota holds that where it appears that a waiver of the privilege under the statute of that state relating to matters learned by physicians during professional attendance on their patients was procured by fraud or misrepresentation, it is not error to disregard it and to allow the privilege to be claimed.

Law Providing for Sterilization of Epileptics in Charitable Institutions Not Constitutional

(Smith vs. Board of Examiners of Feeble-Minded (N. J.), 88 Atl. R. 963)

The Supreme Court of New Jersey holds unconstitutional, as to epileptics in charitable institutions, the statute of 1911 of that state, authorizing and providing for the sterilization of feeble-minded (including idiots, imbeciles and morons), epileptics, rapists, certain criminals and other defectives. The court says that the application of the statute to criminals did not concern it in this case, as the prosecutrix was an epileptic, an unfortunate person, but not a criminal.

The board of examiners created by the statute made an order which, after reciting that Alice Smith was an epileptic inmate of a state charitable institution, that procreation by her was inadvisable, and that there was no probability that her condition would improve to such an extent as to render procreation by her advisable, ordered that an operation of salpingectomy be performed on her. She fell within the classification of the statute in that she was an inmate of the State Village of Epileptics, of which she had been an inmate since 1902. She had had no attack of the disease for the five years last past.

The court after stating that the statute is broad enough to authorize an operation for the sterilization of an epileptic, discusses the nature and dangers of such an operation and says it must be performed by force, at least to the extent of the production of anesthesia which would destroy all liberty of will or action, and that it would threaten the life, and certainly the liberty, of the individual in a manner forbidden by both the state and federal constitutions, unless it were a valid exercise of the police power. The question presented is therefore not one of those constitutional questions that are primarily addressed to the legislature, but a purely legal question of police power, which is a matter for determination by the courts. The police power is defined as the power in the legislature to enact and enforce whatever regulations are in its judgment demanded for the welfare of society at large in order to secure or guard its order, safety, health, or morals. The case in hand raises the very important and novel question whether it is one of the attributes of government to essay the theoretical improvement of society by destroying the function of procreation in certain of its members who are not malefactors against its laws. The court says that the feeble-minded and epileptics are not the only persons in the community whose elimination as undesirable citizens would, or might in the judgment of the legislature, be a distinct benefit to society, and if the enforced sterility of this class be a legitimate exercise of governmental power, a wide field of legislative activity and duty is thrown open to which it would be difficult to assign a legal limit. Passing the discussion of these questions, the court bases its decision in this case on the ground that the statute makes an unconstitutional classification with reference to epileptics, in that it applies only to epileptics who are "inmates confined in the several charitable institutions in the counties and state." The court states that a further objection is that the law, when taking into consideration the magnitude of the purpose in view, which is nothing less than the artificial improvement of society at large, is singularly inept, inasmuch as it does not apply to the much larger class of epileptics who are not confined in the county and state institutions and are vastly more exposed to the temptation and opportunity of procreation, to the much greater injury of society. The suggestion that the classification might be sufficient if the scheme of the statute were to turn the sterilized inmates of the institutions loose on the community, the court dismisses as not worthy of serious consideration.

Malpractice Liability in Incidental Treatment of Felon for Domestic

(Peterson vs. Phelps (Minn.), 143 N. W. R. 798)

The Supreme Court of Minnesota affirms an order denying the defendant a new trial after the plaintiff had recovered a verdict against him for malpractice. The court says that the close question of fact was the defendant's employment. There was no direct request to treat the plaintiff's finger, no promise of payment for services, and apparently no expectation thereof on the part of the defendant. He had been called to attend the wife of a farmer in whose home the plaintiff was employed as a domestic. As the defendant was leaving the house, having attended to his patient, he found the plaintiff near the door where she and her employer had been discussing her aching finger, and one of them asked the defendant if he thought the trouble was a felon. After looking at it, he gave his opinion that it was not, and suggested salt pork as an application. The next time he visited the house he examined the finger, opened it with a needle, and gave directions to continue the use of salt pork. The last time, after attending to the patient on whose account he made these three visits, he again inquired about the finger, was informed that it felt worse, examined it, and advised that some one open it with a needle. This was virtually the plaintiff's whole claim as to the defendant's acceptance of her as a patient. He denied that he ever used a needle, examined, or prescribed for the finger, except that he gave it a look on the first visit; but the jury having adopted the plaintiff's version, and their finding having been approved by the trial court, the supreme court must also accept her testimony as the truth.

The verdict, so far as it embodied a conclusion that the defendant was guilty of malpractice and that the loss of the plaintiff's finger resulted therefrom, was amply supported by the evidence, and it must also be held that the evidence sufficiently established that the plaintiff became a patient of the defendant and was entitled to receive such treatment as the physician possessed of the ordinary care and skill would give.

If the defendant undertook to diagnose, treat, or prescribe for the ailment, his responsibility for failure to possess and use the skill and care of the ordinary physician was not dependent on an express agreement of employment or promise to pay for the services. If he undertook to render services, the law implied an agreement to pay therefor. It has also been held that even as to charity patients and those whose treatment is undertaken without the expectation of pay, the physician must possess the skill and use the care of the ordinary practitioner. The defendant was on a professional visit in the home where the plaintiff was one of the household. She was suffering; the pain interfered with her employment. The head of the house directly or impliedly asked the defendant to examine the finger. Under these conditions his acts in attending to the plaintiff's suffering became quite persuasive of the relation of physician and patient between the two. The jury might well conclude that the plaintiff understood, and had a right so to do, that she was in the hands of a physician who would properly treat the ailment.

In an action for malpractice, in which it is alleged that the defendant did not use skill and care in diagnosing and treating a felon on the plaintiff's finger, and that he did not make the necessary and proper incision in the finger, it is not error to admit testimony of the actual treatment given, including the pricking of the finger with a needle.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 22-26.

Am. Assn. of Pathologists and Bacteriologists, Toronto, Apr. 10-11.
American Surgical Association, New York, April 9-11.
California State Medical Society, Santa Barbara, April 14-16.
Georgia Medical Association, Atlanta, April 14-16.
Louisiana State Medical Society, New Orleans, April 20-23.
Mississippi State Medical Association, Columbus, April 14-16.
Missouri Valley Medical Society, Lincoln, Neb., Mar. 26-27.
New York State Medical Society, New York, April 28-30.
South Carolina Medical Association, Florence, April 14-16.
Tennessee State Medical Association, Memphis, April 7-9.

CONFERENCE ON MEDICAL EDUCATION

Held in Chicago, Feb. 24, 1914

The Tenth Annual Conference of the Council on Medical Education of the American Medical Association was held February 24. There were 244 registered delegates and guests.

The session was presided over by DR. ARTHUR DEAN BEVAN of Chicago, who, in his address, discussed three subjects: Medicine, a function of the state; clinical professors in university medical colleges, and the hospital year. The first portion is published elsewhere in this issue of THE JOURNAL. The second and third portions (in abstract) were as follows:

Clinical Professors in University Medical Schools

The men who are in favor of extending this practice to the clinical chairs say that inasmuch as it has been shown that it is best to have men who are not engaged in private practice teach anatomy and pathology, it follows that it would be best to have men who are not in private practice teach medicine and surgery. With this fundamental proposition, this new experiment is to be tried. The men who are responsible for this experiment are non-medical and non-clinical men. Clinical teachers know that in the very nature of things the teaching of anatomy and pathology is in no way parallel to the teaching of medicine and surgery, because the teaching of medicine and surgery are inseparably associated with the practice of medicine and surgery.

The men who should decide this important question are the clinicians in our better medical schools, the members of the special clinical societies, such as the Congress of American Physicians and Surgeons and its component bodies, the American Surgical Association, the American Ophthalmological Society and like bodies, composed as they are of the best men in these special fields of clinical work, and also the men in the various sections of the American Medical Association, the sections on medicine, surgery and the specialties. Would it not be unwise for any group of men outside of these bodies to formulate and attempt to institute an organization of clinical departments without the cooperation and endorsement of these clinicians? It cannot in fairness be said that the medical profession itself has been slow to make improvements and advances in medical instruction, and that it requires the stimulus and assistance of outside agencies to urge it on to further advances and improvements, because, as a matter of fact, in no other field of human effort have greater advances been made in the last thirty years than in medicine, and in no other department of education during this time have greater advances been made than in medical education.

The head of a clinical department in the medical faculty should be three things: first, a great clinician; second, a trained teacher, and third, a qualified research worker. He should be placed on the same basis as any other university professor and on the same salary and position in the faculty, provided, however, that nothing in this position conflicts with his retaining his place in the medical profession and in the community as a recognized authority in his special field of practice, and with his remaining in close touch with the practice of medicine and the medical profession.

The head of a clinical department should have under him the necessary number of associates and assistants, younger men from 25 to 40, on living salaries enabling them to devote the major portion of their time to teaching and research, and if a university clinical department has any considerable amount of money at its disposal it should be largely used to pay for living salaries to these younger men who are devoting the most productive period of their lives to teaching and research in clinical medicine.

The Hospital Year

The profession in each state must through the efforts of state and county medical societies educate the people, and through the press carry on a vigorous campaign of education such as will result in the people demanding the creation of machinery and appropriations which will give them the protection and benefits of modern scientific medicine. [Dr. Bevan's conclusions are as follows:]

1. There are enough hospital places in the country to provide hospital internships for all those now graduating in medicine.

2. Correspondence with a number of our better schools reveals practical unanimity in favor of adopting the compulsory intern year.

3. The feeling is fairly general that this requirement should be enforced by the state licensing boards.

4. The practical solution of the question should be brought about by the medical school or schools in each state petitioning the state licensing board to adopt a ruling, making such hospital year compulsory, or when necessary to secure the needed modification of the medical act.

5. The adoption of this hospital year requirement should be made compulsory by state boards on students entering October, 1914, so as to put it in force on the men who come up for graduation in 1919. This will give ample time for a complete investigation of the hospital situation of the country and for each school to put itself in touch with the hospitals within its sphere of influence and thereby provide opportunities for its graduates. The time will also be sufficient for the state boards to develop the necessary machinery to put the requirement in force.

The Danger to the Maintenance of High Standards from Excessive Formalism

A. LAWRENCE LOWELL, president of Harvard University, presented a paper on this subject which is reproduced in full elsewhere in this issue.

DISCUSSION

DR. VICTOR C. VAUGHAN, Ann Arbor, Mich.: President Lowell does not object to the requirements, as I understand it, but to the administration of them. He agrees with all of us I think that no man is fit to study medicine unless he is pretty thoroughly acquainted with the fundamental facts in the physical, chemical and biologic sciences. Medicine consists of the application of the discoveries of science to the prevention or the cure of disease. The facts of the biologic, physical and chemical sciences are the pabulum on which medicine feeds. Without these sciences, everything that goes under the name of medicine is fraud, sham and superstition. Medicine can advance no further than the sciences on which it is based, and it is perfectly preposterous to think of teaching any one medicine without the possession on the part of that person of the fundamental facts of those sciences; and with all due respect to Harvard University, it has demonstrated this fact, because for many years Harvard University required only short courses in chemistry for admission among the sciences. It demanded a bachelor's degree, but the man who had the bachelor's degree need not have anything more in the sciences than short courses, and I think that the Harvard men are now quite thoroughly convinced that this is not the way to teach medicine.

There are difficulties in the administration of the requirements for the study of medicine, I do not think they are ideal at all, but I believe they are practical, and with some difficulty they can be administered.

As to languages, the professor of pathology of the University of Michigan, College of Medicine and Surgery, requires that students read Ziegler in German. Most of the instructors in the first two years require of every student during each semester a translation from some current article or some article in some current medical or scientific journal, leaving the choice between German and French.

No man, I care not if he has the genius of Daniel Webster or the wisdom of a Solomon, can properly study medicine without a knowledge of the fundamental sciences on which medicine is based.

Administering the Preliminary College Year in Physics, Chemistry, Biology and Modern Language

A paper on this subject was presented by DR. RICHARD H. WHITEHEAD, dean of the Department of Medicine of the University of Virginia, Charlottesville, which appears in full elsewhere in this issue.

DISCUSSION

DR. PAUL G. WOOLLEY, Cincinnati: The ideas of good medical colleges may be stated as follows:

1. A good medical school does not intend to assist in adding to the numerical burdens already heavy on the profession; it intends that the men it sends out shall be morally and scientifically fit, even if they be few in number.

2. It does not intend to let down its standards for the sake of students.

3. Students must be taught not only the present needs of medicine, but they must be taught to look ahead, be watchful and keep in touch with the future developments in their profession.

4. The duty of a medical faculty is not, primarily, to train men to make a living from the practice of medicine, but to make them agents of social improvement.

The students who indicate a preference for medicine should during the last two years of the elementary school, be given training in botany and in introductory physiology. These subjects will serve to test their interest, and cannot fail to be of value, no matter what the outcome. Drawing and English, during these years, should be taught in connection with the scientific courses; German and mathematics could also be given a vocational bearing.

Good medical schools now require six years of preliminary preparation beyond the elementary school. I believe that this requirement could be reduced to five, at most, and that four of these years, which should include what is now the first year of college, should be spent in the high school, leaving but one additional year to be occupied by university work. This at least could be done in the case of students who announce a desire to prepare for medicine at the beginning of the high-school course. An alternative would be for the high school to prepare students for the university in three years, and allow them to spend their two premedical academic years in the higher institution. The reason the medical school is obliged now to send the graduates of the high schools to the university for two years before it can accept them is chiefly that their preparation in science is deficient.

MR. MICHAEL F. GUYER, Madison, Wis.: At the beginning of the introductory course in biology, the student should be given some motive or general point of view to keep him properly oriented. In my own work I have found the practice of giving students at the outset a few simple principles of interpretation—which are equally applicable to all animals, or plants, either, for that matter, from the lowest to the highest—has always been of great service in helping them to see all facts in their proper relations. They soon come to realize that any special technicality, which for the present may be engaging their attention, is after all only a detail of the general simple principles with which they are already familiar.

If the premedical student is to have a second year of biologic training I should say that it might well be given up mainly to embryology and to comparative anatomy of vertebrates. To be sure, he will get some mammalian and human embryology in his medical training, but experience has shown that he gets incomparably more out of this if he has had a preliminary course on the simpler development of such forms as the frog and chick. While a course in comparative anatomy is perhaps a less indispensable prerequisite, nevertheless a student who has followed the same fundamental organ-systems, from their first comparatively simple condition in primitive vertebrates through their increasing complexity in successive higher forms, has a much broader understanding of anatomy and a more intelligent comprehension of the meaning of human structures than the student who has had only dissection of the human cadaver with perhaps a perfunctory preliminary dissection of some such mammal as the cat.

Lastly, I think it may be justly urged that a modest course is well worth while somewhere in the curriculum that will give premedical students a clear-cut biologic insight into the problems of human life, particularly the phases pertaining to human heredity.

In conclusion, in my opinion, not only should the course in biology supply the student with a certain necessary modicum of biologic facts, but if it is to attain its highest efficiency, it must also leave him with an increased problem-raising, problem-solving attitude of mind, and inculcate in him accuracy of observation and independence of judgment.

CHARLES R. MANN, Associate Professor of Physics, University of Chicago, gave at length the reasons why physics is a stumbling-block in premedical work, and why it does not tend to encourage students in the use of a scientific method of thinking.

Hospitals and Their Relation to Medical Colleges and the Training of Interns

DR. CHRISTIAN R. HOLMES, dean of the Ohio-Miami Medical College of the University of Cincinnati, then presented an illustrated paper on "Hospitals and Their Relation to Medical Colleges and the Training of Interns," which is presented in full on another page.

DISCUSSION

DR. JOHN L. HEFFRON, Syracuse, N. Y.: The ideal condition is for a college to own or control its own hospital, and to have it officered by teachers in medicine, surgery and the various legitimate specialties who are sufficiently remunerated to permit them to devote the greater part of their time to teaching and to research, but not so much of it as to deprive them of the opportunity to come in touch with practitioners of medicine or surgery as consultants, or to deprive a community of the benefits of their labor and experience. Such an ideal would necessitate the control, not only of general hospitals, but of all the hospitals that are of necessity differentiated from general hospitals, as the hospitals for contagious diseases, including tuberculosis, the hospitals for mental diseases, the hospitals for women and children, and those for the treatment of surgical specialties, etc.

The greatest value of hospital training to an intern is the putting on him of responsibility. Hitherto he has had opportunities and duties only. It is the assumption of personal responsibility and the realization of a personal obligation to be accurate, logical, resourceful and honest twenty-four hours in every day that transforms the medical student into a safe practitioner of medicine.

DR. WALTER L. BIERRING, Des Moines, Iowa: It is clearly evident that a hospital year must be added to the requirements for practice. Medical colleges, therefore, will do well to anticipate the action of the Council on Medical Education and of licensing boards, because I feel that in a few years all licensing boards will generally adopt this requirement.

DR. J. M. BALDY, Philadelphia, favored the hospital year and said: The cry in regard to the hospital year, as was shown last year, was the fear that it could not be carried out. In the first place, it was thought that there were not sufficient hospitals; second, that the hospitals could not be adequately controlled; and third, that the working scheme, if it were controlled, would not be an efficient one. In trying out the hospital year in Pennsylvania we have all these difficulties to contend with. We propose to feel our way carefully and have gone at the solution of the matter in that spirit.

Preliminary Draft of the Report of the Committee to Investigate Graduate Medical Instruction

The report was presented by DR. H. D. ARNOLD, Boston. The other members of the committee are Drs. Arthur Dean Bevan and N. P. Colwell.

The report says: It is not practical to have a sharp dividing-line between the courses of the undergraduate and of the graduate schools on the basis of the grade of the work. The academic idea of the relation of the graduate school is modified to meet the practical problem of what is reasonably demanded by the graduates.

We believe that it is desirable that the field of graduate medical instruction should be made even more extensive than this, and that it should include courses equivalent to the elementary as well as to the advanced courses of the undergraduate school. Many graduates for various reasons recognize sooner or later the need of reviewing these elementary courses or of studying them more thoroughly than they did during their medical course. Moreover, what is elementary in the best schools is advanced work for graduates of poorer schools. Many graduates who are desirous of increasing their medical knowledge are not equipped to take advantage of advanced courses. For such physicians courses of an elementary character should be provided. As a rule, the curriculum in the undergraduate school is poorly adapted to the needs of these men, and it is more practical to have courses in these subjects specially organized for them by the graduate schools.

If the graduate school is to meet the needs of graduates in medicine, as they now exist in this country; and if it is to render the greatest service to the profession and to the community it should provide courses in medicine varying from elementary to the most advanced. From the point of view of the community, it is the most poorly prepared physicians who should be most encouraged to improve their medical knowledge and experience.

The objects of graduate medical instruction may be enumerated as follows: (1) to offer advanced instruction and opportunities for research; (2) to prepare physicians for special fields of work; (3) to offer opportunities for review, and for keeping in touch with the advances in medical science since the physician graduated, and (4) to make up the deficiencies in previous medical education.

As a matter of benefit to the public, any earnest, reputable practitioner, licensed by the proper authorities to practice medicine on the public, should be allowed to take such courses as he is qualified for by previous training and experience.

On this basis a graduate of the poorest school might legitimately be admitted for instruction in a graduate medical school if he is already a licensed practitioner of medicine. A sharp line should be drawn, however, against graduates of schools which give an inadequate training, if the graduates are not legally registered.

It is generally recognized that the loose regulations about granting certificates for postgraduate work often result in a definite evil. Such a certificate usually has a form similar to a diploma. It is suitable for display and is calculated to impress the public. Ordinary persons are apt to regard such a certificate, displayed in a doctor's office, in much the same light as a degree, and they look on its possessor as a full-fledged specialist in any subject mentioned on the certificate. Advantage is taken of this by unscrupulous physicians who pose as specialists without any real justification in the knowledge or experience they have gained. Such practice is little short of quackery. The American Medical Association should use its influence to correct this evil, for the whole profession suffers in reputation on account of the poor work done by such so-called specialists.

There can be no uniform admission requirements of an educational character. While the scope of a graduate school may reach from the elementary to the most advanced courses, few schools will be able to cover satisfactorily the range of such studies.

Whether or not it will be wise to attempt a classification of graduate schools remains to be seen. It is evident that any system of classification must be more complicated than the present classification of medical schools. One school may have excellent opportunities for instruction in clinical subjects, but may be very poor in the laboratory courses, or the reverse may be true. Schools should be encouraged to do only such work as they can do well, but they should in some way receive proper recognition for good work, no matter how limited the field is. In a medical center, where there are two or more schools, it would seem desirable to arrange some plan for cooperation between the schools in graduate instruction. Each school can do the work for which it is best equipped, or in which it is most interested.

The more the subject of graduate instruction is studied, the more important it appears in relation to the proper care of the public. The object of the Council is to be helpful to those schools which wish to give good instruction of this sort, and to gather reliable information for the benefit of those who are seeking such instruction.

Other Proceedings of the Conference

DR. G. T. MONOD, Vichy, France, was introduced and said he had been commissioned by the Minister of Public Instruction to visit America, make observations, and report on graduate medical instruction. He had thus far visited Boston, Baltimore and New York, and his expectations had been surpassed with regard to the excellence and thoroughness of teaching done in the medical schools of those cities. He predicted that before long the best men in France and other countries would cross the ocean to avail themselves of the marvelous opportunities for research offered in America.

DR. E. P. LYON, dean of the University of Minnesota Medical School, Minneapolis, said that he was certain that educators in general would be very loath to extend the term "graduate instruction" to include all the things mentioned in the report of the committee.

DR. R. W. POWELL, registrar, Ottawa, Ont., gave a short historical summary of what has been done in Canada by the system known as the Dominion medical registration. His paper is reproduced entire on another page.

DR. WILLIAM L. RODMAN, Philadelphia, spoke of the feasibility of establishing a voluntary national board of examiners whose standard would be so high that it might be recognized by all of the state boards.

DR. CASEY A. WOOD, Chicago, spoke in favor of reciprocity between states, but urged the necessity of establishing uniform requirements for practice in the various states.

A vote of thanks to Dr. Bevan, chairman of the conference, for the able and impartial manner in which he had presided over the deliberations of the meeting, which was proposed by Dr. Abraham Jacobi, and seconded by several members, brought the conference to a close.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Twenty-Fourth Annual Meeting, held in Chicago, Feb. 25, 1914

The President, DR. ELIAS P. LYON, Minneapolis, in the Chair

Officers Elected

The following officers were elected for the ensuing year: president, Dr. Isadore Dyer, Tulane University; vice-president, Dr. Charles R. Bardeen, University of Wisconsin; secretary-treasurer, Dr. Fred. C. Zapffe, 3431 Lexington Street, Chicago; members executive council, Dr. William J. Means, chairman, Ohio State University; Dr. Randolph Winslow, University of Maryland; Dr. Egbert Le Fevre, University and Bellevue Hospital Medical College; Dr. F. C. Waite, Western Reserve University; Dr. E. P. Lyon, University of Minnesota, the president and the secretary.

Dr. William J. Means was appointed delegate to the Council on Medical Education, and Dr. Fred. C. Zapffe, delegate to the Federation of State Medical Boards.

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Report of Committee on Medical Education and Pedagogics

DR. ISADORE DYER, New Orleans: A questionnaire was sent to every college in membership in this association to state in exact terms facts concerning its organization, methods and opinions concerning the following questions:

1. How does the intending student of medicine formulate his entrance credits with your school?

There is no uniformity in the method of establishing entrance credits. High schools are accepted as standard without referendum to any authoritative source of final standardization. No systematic basis can be formulated until some central authority, like the Carnegie Foundation, the General Education Board or a national examining board will provide a list of acceptable high schools, derived from the whole of the United States. The credits for college work are mostly accepted on the estimate of the college issuing them. No standard form of requirements seem to be in use.

The committee concludes as regulations have been promulgated by this association covering the basis for entrance credits either from the high school or the college that some systematic forms should be devised by which all colleges in membership should have uniform methods of evaluation of credits, so set out that the student transferring from one college to another might do so with credits easily understood as standard.

2. Give detailed statement of courses required in each year for M.D. degree, branch, composition, hours, scope of laboratory work.

3. Would you suggest changes in present arrangement?

The general conclusion must be drawn that each college arranges its work on a plan which suits its own opportunities best, and not with a view to coordinating with other institutions. The number of hours in each year varies considerably, as does the distribution of subjects of instruction. The absence of uniformity argues the need of a special report by this committee, with a view of establishing a basis through which the credits from one college may be acceptable on their face value to another college of the same rating.

4. Is your work arranged in half-year periods, so that students may transfer to any year from another college to your college? What are the conditions for transfer?

It would seem that there is room for entertaining the value to be placed on students migrating from one college to another in midterm. Often potent reasons are advanced for such transfer and enough colleges permit such to argue the recognition of this practice when the curriculum will allow it.

5. What curricular outline do you propose for the projected fifth year, when it is required?

6. Does your institution propose to require a fifth or sixth hospital year? How will you satisfy this requirement?

The conclusions are that very few colleges want a fifth year and that the large majority of the colleges in membership will not inaugurate a fifth year as a part of the regular curriculum, unless forced to do so; that the available hospital provisions under college control or direction will prevent any general adoption of a hospital year as part of the college course, no matter how much it may be desired.

6. (Continued.) Will you express an opinion as to the method and desirability of making the fifth year elective, but that a specified number of subjects should be taken, with a specified number of total hours, divided among required major and minor subjects?

The preponderating objection to an elective fifth year as replacing the intern year apparently disposes of this question; but as state boards of examiners are yet debating the alternative it would be well to entertain the question as one simply laid on the table and not entirely relegated.

If and when the hospital year is required either before the degree is conferred, or after the degree with added credit, there must be provision in acceptable hospitals for all graduates who hope to qualify before state boards. It seems unlikely that this hospital provision will come for some time, and even if there are enough hospitals of proper grade to supply places for interns, the further condition is evident that there must be concert or agreement with medical colleges, by which proper work may be afforded and proper supervision enforced so as to satisfy the necessary credits.

In the meantime a considerable percentage of graduates will be without hospital appointments, and without an alternative to offer state boards or even the colleges requiring the intern year. Some state boards accept this position as one needing provision and the postgraduate year of clinical work done at a hospital, or a year in research or public health service is accepted.

The intern must have exceptional place in a well-organized hospital to get all the clinical work he needs, and it is not an uncommon thing for the clinical student, not an intern, to get a larger variety of work than does the intern.

The question has been submitted in good faith as one of a number imminent in the medical problems of to-day and it has received a fair consideration.

Should a Hospital Internship Be Required as a Prerequisite to Graduation?

DR. JOHN M. DODSON, Chicago: With the state of Pennsylvania requiring an intern year as a prerequisite to a diploma, and with the hospitals clamoring for interns who cannot be supplied, the question of an intern year is no longer one for discussion. The advantages of such a requirement are evident. In the first place, it would lead to a better correlation of the work between the college and the hospital. In the second place, it would give the college and the hospital a hold on the intern, to the end that it could compel him to fulfil his contract, and, third, the diploma would stand for a complete medical education, corresponding to the degrees conferred abroad in the foreign schools.

Hospitals must devise methods of administration whereby this intern year shall be a real educational year. The best pedagogic results are attained by a departmental service, so that the intern shall do one thing long enough to learn to do it well. When the service is so administered that an intern who has spent a year in one department can secure an extension of six months or a year in another department, it makes a well-rounded and satisfactory service. There should also be a resident physician or surgeon whose business it is to conduct the medical work of the hospital under the direction of the staff, and see that the interns do their duty, and that they are properly instructed. The solution of the hospital problem must come about by some sort of affiliation by specific contract, by which the medical work is absolutely in control of the faculty of the college. In such an arrangement both contracting parties have certain duties. The college is obligated to furnish interns who are adequately trained for the service. I should also make it a provision of the fifth year that every intern shall do some piece of work of a research or investigative character, and embody his results in a thesis. The intern must have decent quarters and decent food. Extramural members of the faculty should serve as instructors to these interns, and meet the faculty from time to time. The faculty ought to have some control over appointments. It should have the right to protest against the appointment of any person it does not deem fit. The hospital should not limit its appointments to the students from one school. The term of service ought to be as nearly uniform as possible, and I should like to see it made a year, with the privilege of a six or twelve months' extension. This five-year arrangement is of more importance to the hospital than to the college. The college needs the hospital, but the hospital needs the college more, because it needs the quickening, elevating influence of a teaching organization.

DISCUSSION

DR. W. S. CARTER, Galveston, Tex.: An intern year is perhaps the most important part of one's medical training, but the conditions that obtain in a large city do not obtain in the smaller cities. For instance, we are now placing probably fifteen interns in different hospitals in Texas, and as many more in hospitals outside of the state, yet we cannot at present secure enough places for all our graduates. Furthermore, we cannot control the hospital work. The work is not

uniform or organized, and it seems unreasonable to expect a medical college to give credit for that sort of work, or even to require it for the degree. It seems a much more reasonable arrangement to have this requirement come from the state board of medical examiners than from the medical colleges. Until the hospitals can be improved, until there can be some standardization, until we can secure cooperation between the hospitals and the medical schools, it seems impossible to require this fifth or intern year. The matter of continuous service in one department seems a mistake. Undoubtedly, it is the best thing for the hospital and for the staff, but it is not for the intern. He should not specialize until he has rounded out his training in every service.

DR. JOHN L. HEFFRON, Syracuse, N. Y.: I am in accord with the idea that the degree of Doctor of Medicine ought to be withheld until after the student has passed a term of service in the hospital. I am ready to advocate that every student shall require of a man who wishes to practice medicine at least one year of hospital work.

DR. B. R. SHURLY, Detroit: We have established an elective fifth year and we are able to supervise the instruction. The student can be given his examination at the end of his elective fifth year, and the college can have the absolute appointive power in the various hospitals. I would rather see a man take an intern service of one year than to be compelled to take the two years preliminary college work.

The Teaching of Medicine

DR. CHARLES HUGH NEILSON, St. Louis: If we should devise some method by which the student could carry the facts of anatomy and chemistry to physiology, and the facts of the fundamentals to the clinical years, the problems of teaching would be solved. This can be done by the correlation of related ideas in an elastic curriculum. Too few clinicians know of the work being done in the first two years, and many men in the first two years have no real conception of the work done in the last two years because they are nonmedical men or they are too wrapped up in their own problems. These things are so, first, because little or no attempt is made to develop mutual interest between the two lines of work, and secondly, because lack of sympathetic relationship is the natural outgrowth of the departmental idea. Departments are made up of specialists who are engrossed with their own problems, and are heedless of related problems. Specialism in clinical medicine gives the patient a better chance for life and health, but the specialist as a teacher of medicine has made medical education piecemeal. Specialism is and should be the foundation of medical teaching, but it should be a correlated specialism. A conference of the departments of physiology, anatomy and neurology to discuss the teaching of diseases of the nervous system might make a difficult subject more easy. The same is true of every other subject. Every subject should be taught by a master. Research work should be encouraged, but a fair proportion of the research worker's time should be demanded for actual teaching in the lecture-hall and laboratory. These great men should be an inspiration. The trouble lies in attempting to teach too much in detail instead of along general lines. The pendulum of laboratory and experimental work has swung far beyond its normal arc. Each department in the college attempts to fill the educational cup full. Let us teach more by teaching less. Our laboratories are too often mentality deadeners. In the clinical years the same waste of time, material and ability is often found. The teaching here should be type teaching. It is a waste to attempt to teach with too much material, quite as much so as with too little. I believe in the laboratory, but I am convinced that we are not getting the best results from it. Let us bind our whole medical structure together with a correlation of related ideas.

Teaching of Surgery

DR. ARTHUR DEAN BEVAN, Chicago: In most of our medical schools we have too many men in the clinical department. Many are taken into the department because of their connection with some hospital, which will furnish the school with a certain amount of instruction. I am able to handle my department with about twenty-five men. In some schools, as is the case abroad, the unit system prevails; that is, one man is the head of one unit at one hospital, another man at another hospital, and so on. This may be a good plan where there are many students, but not where the classes number about a hundred men. In addition to the head of the department there should be about ten men to help carry the burden. It would be desirable if these men were salaried so that they could devote all or the largest part of their time to the work. I should not like to see the head of the department a full-time, salaried man, not expected to do any practice, and turning into the treasury of the institution any fees which may come to him from consultation work. It would be much more desirable to adopt the German plan, giving the head of the department a good salary for the major part of his time, and allowing him to devote some of his time to outside work, provided it is done in his hospital, or in connection with the clinical hospital in which he is teaching, with the same assistants, the same staff and the same clinical laboratory which he uses in his regular teaching work. If there is much money to be paid for salaries, it should go to the ten men who are carrying the burden of the department.

For a class of 100 students a hospital with at least seventy-five beds is necessary. Billroth did all his teaching with eighty beds. That would mean probably a teaching hospital of 300 beds or more for 100 senior students. Overshadowing the hospital, so far as clinical instruction in surgery is concerned, is the free dispensary or outpatient department, because it furnishes the right sort of material for the students. For teaching in internal medicine the hospital material is of more value. I should like to emphasize the importance of the outpatient material in the teaching of surgery. For a school of 100 students, 15,000 surgical cases a year, including genito-urinary and orthopedic cases, would be the number needed to do the work creditably. We should demand of each man that he be a trained clinician, a trained teacher, and qualified to do some research work. Nothing is more important in the surgical department than well-equipped clinical and research laboratories. I think that some of the time allotted to surgery should be given to surgical anatomy, surgical pathology, clinical and conference courses, genito-urinary surgery, orthopedics, and work on the cadaver, as well as to the clinics. The amount of time that can be devoted to hospital training in the senior year is so inadequate that it is to be regarded simply as an introduction to the intern year which is to follow.

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Diseases of Children, Chicago

March, VII, No. 3, pp. 169-252

1 The Nutritive Value of Some Proprietary Infant Foods. R. Wheeler and A. Biester, Urbana, Ill.
2 Pylorus, Pylorospasm and Allied Spasms in Infants. A. F. Hess, New York.
3 *Cardiac Stimulants: Strychnin and Caffein. W. P. Lucas, San Francisco.
4 *The Value of the Complement Fixation Test in the Treatment of Gonococcus Vulvovaginitis. G. G. Smith, Boston.
5 A Probable Relation Between Enlargement of Thymus Body, Lymphatism and Shock. H. C. Clark, Ancon, Canal Zone.
6 Rules for Calculating the Approximate Composition of Milk from the Specific Gravity and Percentage of Fat as Determined by the Babcock Method. H. I. Bowditch, Boston, and A. W. Bosworth, Geneva, N. Y.

3. Cardiac Stimulants: Strychnin and Caffein.—Lucas has watched the effects of strychnin in nine cases during the past few months. All these cases were the result of endocarditis occurring in the course of rheumatic fever infection. Strychnin was given for a period of from two to four days, in varying doses, and its effect watched closely and compared with the

patients' average picture as relating to cardiac condition, pulse, respiration, blood-pressure, also their general improvement, appetite, freedom from pain, improvement in restlessness, etc., when simply resting in bed or resting in bed plus digitalis. Lucas found that strychnin is practically of no avail when given in the ordinary doses which are prescribed for children. Even in adult doses of 1/50, 1/40 or 1/30 grain, there were no appreciable effects. It was only when doses amounting to 1/10 grain or more were given (either at one dose or in quick succession of smaller doses) that any appreciable effect was noted; and then the effect appeared within thirty minutes and disappeared within two hours.

In four cases in which he studied caffein sodium benzoate as a stimulant, in the ordinary dose of ¼ or ½ grain hypodermically or by mouth, Lucas could observe no effect; only in doses of two or more grains hypodermically was there any appreciable effect, and then the effect was very small and of short duration. From these observations he concludes that strychnin and caffein in the doses usually used for cardiac stimulation are of no value. It is only when the larger, maximum doses are used that we get any effect, and the effect is usually then of short duration. Whether this is a beneficial effect is even questionable in children with cardiac involvement. It may be that strychnin stimulation makes the heart work harder, and that it should not be used as a cardiac stimulant. Its effect on respiration in the conventional dosage is of no value; in larger doses, it does appear to slow the respiration up to the point where there are toxic symptoms (slight twitchings) or increased hypersensitiveness of the reflex arc, or when the heart action becomes more rapid and the blood-pressure falls.

4. **Complement-Fixation Test in Treatment of Gonococcus Vulvovaginitis.**—It is Smith's belief that in the determination of a cure a weakly positive test cannot be considered evidence that infection is still present. A negative test, on the other hand, appears to be proof of its absence. Of seven patients who had weakly positive blood tests a year ago, five are now clinically well. Of these, two have negative bloods, one a moderately positive and two weakly positive. The other two show some vaginitis in which, however, gonococci could not be found. Smith claims that long and persistent treatment, frequent and severe tests of its probable cure, are necessary to complete success. In the great majority of cases of vulvovaginitis efficient treatment will insure the destruction of the gonococcus; a small proportion of such cases, however, will be liable to attacks of non-gonococcal inflammation for some time.

Boston Medical and Surgical Journal

February 19, CLXX, No. 8, pp. 261-296

7 The Significance of Intra-Abdominal "Bands," "Folds" and Veils. W. S. Bainbridge, New York.
8 *Prognosis of Sarcoma of Testicle. E. A. Codman and R. F. Sheldon, Boston.
9 Have Early Claims of Salvarsan Been Realized? C. M. Smith, Boston.

February 26, CLXX, No. 9, pp. 297-332

10 Study of Some Types of Disturbance of Stomach and Intestines Associated with Adhesions Involving the Intestinal Tract, and Their Treatment. H. F. Hewes, Boston.
11 Serodiagnosis of Pregnancy. A. K. Paine, Boston.
12 Seven Cases of Serious Eye Complications Following Use of Salvarsan. P. S. McAdams, Boston.
13 Early Diagnosis and Treatment of Dementia Praecox. E. Mellus, West Newton, Mass.
14 Diabetes and Surgical Operations. C. G. Cumston, Boston.

8. **The Prognosis of Sarcoma of the Testicle.**—Of 64 known cases analyzed by Codman and Sheldon 56 patients were operated on. Thirteen are living (average time after operation 9 years; extremes 2 and 28 years), and 10 have died from something else (average time after operation, 10 years; extremes 7 months and 26 years). That is, 23 or 41.07 per cent. of those operated on survived the disease. If 8 unoperated cases and 12 cases operated on when metastases were evident are excluded, 52.27 per cent. were cured. The authors conclude, therefore, that the prognosis of sarcoma of the testicle, while bad, is not, when operated, so universally bad as text-books would lead one to infer.

Among the 64 cases there was but 1 with the origin of the disease in the epididymis, but among the 16 cases, the results of which were not traced, there were 2 of this nature. In these 3 cases the preliminary diagnosis was tuberculous epididymitis; in 2 the pathologic report was sarcoma; in the third there is no record of pathologic examination, but macroscopically the specimen was sarcoma. In 4 of the 64 known cases the testicle had not descended at birth, thereby confirming the belief that the undescended testicle is more prone to sarcomatous degeneration than the normally placed organ.

Of 33 operated patients who died from the disease, 21 had no sign of metastasis at operations, yet death occurred in all within three years. Only 12 showed metastasis at operation; in spite of the fact that in 2 of these additional dissection was done, all were fatal. Nearly every case gave a history of trauma; but Codman and Sheldon are not inclined to regard this as important in the etiology.

Georgia Medical Association Journal, Augusta

February, III, No. 10, pp. 323-358

15 Care of the Newborn. M. A. Clark, Macon.
16 Plea for More Interest in Pediatrics. C. A. Rhodes, Atlanta.
17 Intubation in Diphtheria. W. N. Adkins, Atlanta.
18 Clinical Significance of Stools of Infancy and Childhood. H. W. Reese, Savannah.
19 Treatment of Convulsions; Report of Six Cases. J. R. McMichael, Quitman.
20 Acute Mastoiditis, Report of Four Patients Treated with Vaccines. A. B. Mason, Waycross.
21 Some Things Doctors Need to Think About and Act On. Q. Holton, Douglas.
22 Oil-Ether Anesthesia. J. C. Pate, Valdosta.

Indiana State Medical Association Journal, Fort Wayne

February, VII, No. 2, pp. 47-92

23 Cancer Prophylaxis. M. H. Hadley, Indianapolis.
24 *Manner of Growth and Surgical Treatment of Cancer of Breast. W. D. Gatch, Indianapolis.
25 Selection of Cases for Internal Bone Splints. K. Speed, Chicago.
26 Medical and Surgical Crimes. E. DeW. Wales, Indianapolis.

24. Abstracted in THE JOURNAL, Oct. 11, 1913, p. 1400.

Journal-Lancet, Minneapolis

February 15, XXXIV, No. 4, pp. 93-119

27 *Pathology of Thyroids from Cases of Toxic-Non-Exophthalmic Goiter. L. B. Wilson, Rochester, Minn.
28 Mastoidectomy, with Report of Cases. A. D. McCannel, Minot, N. D.
29 *Medical Treatment of Gall-Bladder Infections, with Report of Cases. D. L. Rundlett, Sioux Falls, S. D.

27. **Pathology of Thyroids.**—Wilson studied 431 thyroids removed from cases of true exophthalmic goiter, 373 thyroids removed from as many cases of non-toxic (i. e., simple) goiter and 129 thyroids removed from toxic-non-exophthalmic cases with symptoms closely approaching the picture of Grave's disease. One hundred and fifty-five thyroids removed from toxic-non-exophthalmic cases in which the clinical picture closely resembles, and, in many instances, cannot be differentiated from, the cardiovascular complex resulting from alcoholic, luetic, septic and other well-known toxins, and thyroids from 90 cases similar to the last, but of more mild or doubtful toxicity.

The results of this study are summarized as follows: The pathology of the thyroid in true exophthalmic goiter is essentially a primary parenchymatous hypertrophy and hyperplasia, i. e., an increased amount of functionating parenchyma associated with an increased absorption. The process is an acute one. The pathology of atoxic simple goiter is marked essentially by atrophic parenchyma, decreased function and decreased absorption. The process is a chronic one. The pathology of toxic-non-exophthalmic goiter (i. e., those resembling exophthalmic goiter) is one of increased parenchyma through regenerative processes in atrophic parenchyma or the formation of new parenchyma of the fetal type with an increase in each instance of secretory activity and of absorption. The process is a chronic one, but sufficiently active to cause the patient to consult a surgeon earlier than do those cases in clinical Group 1. The nearer the cases (toxic-non-exophthalmics) approach, in age and symptoms, true exophthalmic goiter, the shorter the duration of the

period of goiter before operation, and the smaller the average weight of the gland at the time of its removal.

The cases of toxic goiter of clinical Group 1 (i. e., those in which the symptoms are of the cardiovascular variety) much more closely resemble cases of simple goiter in their pathology in all respects than do the cases of clinical Group 2. A larger number of them are of the colloid-goiter type, the enlargement of the thyroid has existed for a longer period before operation, and the portion of the gland removed is materially larger than in those cases of clinical Group 2. Finally, it is stated that all the above pathologic evidence points to a constant relative association of increased secretion and increased absorption from the thyroid, proportional to the degree of toxicity on the part of the patient. We have as yet no absolute proof that such secretion and absorption are the cause of, rather than coordinate with, the symptoms, but the presented evidence strongly points to that conclusion.

29. **Treatment of Gall-Bladder Infections.**—The treatment of these conditions, from a medical point of view, Rundlett says, is very unsatisfactory, and in his experience a cure is impossible. To be sure, symptoms are often relieved temporarily, but there is always a recurrence on the slightest indiscretion in diet, or slight chilling of the body. He has obtained the best results from the use of succinate and salicylate of soda, 5 grains of each in plenty of hot water, four or five times a day, with Carlsbad salt in hot water in the morning to clean out the intestinal canal and help to relieve the acidity of the somach that is generally present.

He has had no success with hexamethylentetramin in these cases. When given in large enough doses to do any good along the bile tract, it caused too much irritation of the stomach and kidneys to be safe to use. He has not had very much faith in olive oil. In a case of this kind there is a marked intolerance for fats of all kinds, due probably to the mild grade of pancreatitis, which is almost always present. For the intestinal putrefaction with distention of abdomen, Rundlett has often used a combination of ox-bile, pancreatin, bicarbonate of soda, betanaphthol and salol. This, given about two hours after meals, certainly helps to keep the fermentation down, but is only palliative. A mild diet, in which fats are largely excluded, has in his hands worked the best. He allows patients to have milk, buttermilk, fresh vegetables and fruits. All foods liable to putrefaction, such as overripe cheese, shell-fish and the like, are to be avoided; also highly seasoned foods, gravies and pastries. Water, preferably one of the mildly alkaline waters, is to be given in abundance. The use of bacterial vaccines before drainage, has proven disappointing, but after drainage they certainly help markedly in cleaning up the infection. Rundlett's experience has been that the rational treatment of these cases has been a prompt gall-bladder drainage, and his paper was prepared more with the intention of emphasizing this feature than to give any new ideas on medical treatment of gall-bladder disease.

Kansas Medical Society Journal, Kansas City, Kan.

February, XIV, No. 2, pp. 49-88

30 Malignant Papillary Cystadenomas of Ovary. C. C. Nesselrode, Kansas City.
31 Surgery of Gall-Bladder. J. C. Butler, Stafford.
32 Prevention of Typhoid. J. C. Cornell, Parsons.

Medical Record, New York

February 21, LXXXV, No. 8, pp. 323-362

33 *Intravenous Injections of Sodium Salicylate in Treatment of Rheumatic Affections. L. A. Conner, New York.
34 Study of Prostitution in Europe. D. C. McMurtrie, New York.
35 The Inflammatory Affections of Nasal Accessory Sinuses in Children. S. Oppenheimer, New York.
36 *Carditis. G. M. Swift, New York.
37 *Technic in Roentgentherapy, with Especial Reference to Deep Therapy as Practiced at Freiburg by Kronig and Gauss. A. F. Holding, New York.
38 Consideration of Objections to Psychanalysis. S. A. Tannenbaum, New York.
39 Value of Absorption Methods in Wassermann Test. M. P. Olmstead, New York.

February 28, LXXXV, No. 9, pp. 369-414

40 Extradition of Insane Persons. H. R. Stedman, Boston.
41 Mental Torticollis as a Psychoneurosis. L. P. Clark, New York.
42 Evolution of the Study of Anatomy and Its Important Relation to the Development of Surgical Knowledge. J. E. Mears, Philadelphia.
43 *Care of Surgical Patients. D. C. Balfour, Rochester, Minn.
44 Traumatic Neuroses, Due to Alleged or Actual Injury, from the Medicolegal Standpoint. R. Wallace, Chattanooga, Tenn.
45 Eclampsia, with Total Absence of Albumin but Generalized, Hard Edema. (Pure Chloride-Retention?) C. K. Austin, Paris, France.
46 Causation of Dreams. H. Rahmet, Cairo, Egypt.
47 Lichen Planus of the Glans Penis; Its Treatment with Roentgen Rays. F. Wise, New York.
48 Standard Educational Qualification for the Anesthetist. R. C. Coburn, New York.

33. **Intravenous Injections of Sodium in Rheumatic Affections.**—Conner's experience with the intravenous administration of the drug is limited to twelve cases of articular rheumatism of various degrees of severity in which about 130 injections were used. Chemically pure, crystalline sodium salicylate was used alone in a 20 per cent. solution. He at first used a needle of the size commonly employed for blood cultures and occasionally this was followed by thrombosis at the site of puncture. When, however, he began using a very small hypodermic needle and was careful to see that it had a fine, sharp point, this difficulty ceased immediately and it was found that the same vein could be used over and over again without the slightest pain and without local irritation or thrombosis.

In most cases the dose has been either 15 or 20 grains and the injections have been given at twelve- or eight-hour intervals over a period of from three to six days. Occasionally, in robust men, as much as 30 grains have been given at a time and as much as 120 grains given in the first twenty-four hours without any unpleasant effect whatever. Indeed, one of the noticeable features of this method of administration, in Conner's experience, has been the entire absence of shock, prostration or other objectionable constitutional effect. The relief of pain is prompter and more pronounced than is usual when the drug is administered by mouth.

In spite of examples of marked benefit Conner is by no means convinced that the intravenous method is, in general, more effective than the usual one, and is far from feeling that it should replace the method of mouth administration for routine cases. That it has a field of usefulness, however, he is convinced. It solves most satisfactorily the problem of the treatment of those patients who are quite unable to retain the drug when given by mouth.

36. **Carditis.**—The points emphasized by Swift are: (1) that acute cardiac affections are due to germ infections; a sepsis (according to Rosenow the most common infecting germ is *Streptococcus viridans*); (2) that the infecting germs are distributed throughout all the structures of the heart and by the blood vessels of the coronary system, and (3) that the most important factor in treatment is the discovery of the source of infection and its removal.

37. Abstructed in THE JOURNAL, Jan. 24, 1914, p. 329.

43 **Care of Surgical Patients.**—Balfour emphasizes the importance of explaining to patients recovering from a surgical operation just how to take care of themselves and what they should expect in the way of symptoms after being dismissed from the hospital. He says that it is a mistake to allow patients to believe that their recovery will be complete in a month or two after an operation on the gall-bladder, stomach or even the appendix. The postoperative treatment of these patients in the way of judicious living should continue for several months according to the type of operation. To patients who have been operated on for exophthalmic goiter should be carefully explained the possibility of a recurrence of the trouble, and all the circumstances of every case should be explained to some member of the family at the time of operation. If there is a possibility of hernia following drainage the patient should be apprised of the fact. These patients should also be told as explicitly how long to refrain from their usual work. The basis of treatment of surgical patients is simplicity. The after-care should cause little worry except in the event of complications, since the work should be completed in the operating room.

Missouri State Medical Association Journal

February, X, No. 8, pp. 267-304

49 The Semicircular Canals and Function of Equilibrium. G. E. Shambaugh, Chicago.
50 Etiology of Nasal Hydrorrhea, with Case Reports. H. Kahn, Chicago.
51 Luke, Greek Physician. G. Homan, St. Louis.
52 Ocular Lesions Connected with Vascular Disease. J. W. Charles, St. Louis.
53 Typhoid. J. A. Fuson, Mansfield, Mo.
54 Poliomyelitis Acuta. A. L. Skoog and E. T. Gibson, Kansas City, Mo.
55 *Bilateral Renal Calculi. O. H. Brown and E. A. Babler, St. Louis.
56 Remote Effects of Chronic Appendicitis. J. C. Lyter, Moberly.
57 Scientific Work in Medicine. T. O. Klingner, Springfield.
58 Typhoid Vaccine. J. D. Seba, Bland.

55. **Bilateral Renal Calculi.**—The not infrequent and distressing end-results of medical treatment of nephrolithiasis, unilateral as well as bilateral, the authors claim, warrant the conclusions that, first, every case of suspected renal calculus is entitled to a skiagraph of both kidneys, and, if necessary, ureteral catheterization, in addition to the usual method of diagnosis; and, second, that the early removal of the stone offers the patient the best possible chance.

New Mexico Medical Journal, Las Cruces

February, XI, No. 5, pp. 153-176

59 Typhoid Treatment, Prevention and Immunization. S. A. Milliken, Pimos Altos.
60 Suppurative Nephritis. E. B. Shaw, Las Vegas.
61 Operative Treatment of Uterine Retrodisplacements. C. M. Yater, Roswell.
62 Thrombosis and Embolism Following Abdominal Operations and Childbirth. L. G. Rice, Albuquerque.

New York Medical Journal

February 21, XCIX, No. 8, pp. 357-408

63 Glaucoma. W. Reber, Philadelphia.
64 Glioma of Cauda Equina. W. M. Leszynsky, New York.
65 Transvestism. B. S. Talmey, New York.
66 Primary Pernicious Anemia. W. G. Baetz, Canal Zone.
67 Care of Crippled Children in Germany. D. C. McMurtrie, New York.
68 Eyes of Neurotic. C. W. Le Fever, Philadelphia.
69 Morality of Venereal Prophylaxis. R. A. Bachmann, United States Navy.
70 Natural Defenses of the Body Against Disease. C. C. Sutter, Rochester, N. Y.

February 28, XCIX, No. 9, pp. 409-460

71 Motor Anomalies of the Eye. A. Duane, New York.
72 *Futility of Phenolsulphonephthalein as an Indicator of Renal Function. M. W. Ware, New York.
73 Properties of Parathyroid Extracts. H. R. Harrower, London, England.
74 *Ross Jelly Film Method in the Diagnosis of Syphilis. J. A. Roddy, Philadelphia.
75 *New Method of Determining the Dust in Air and in Fresh Air Schoolrooms. J. B. Todd, Syracuse.
76 Diagnosis of the More Common Diseases of the Rectum and Anus. E. J. Leavitt, New York.
77 Surgery in Goiter. I. A. Stoloff, New York.
78 Roentgen Diagnosis. J. Friedmann, New York.
79 Carbon Disulphid as a Therapeutic Agent. H. H. Seelye, Daytona, Fla.

72. **Futility of Phenolsulphonephthalein as an Indicator of Renal Function.**—The efficiency claimed for the drug because of its complete rapid elimination and its reappearance in an unaltered form, Ware claims cannot bespeak any elaboration in the sense of work done on the part of the kidney, for this is denied by the very definition of efficiency, which represents the ratio of useful work to energy expended. The dye output can be estimated colorimetrically. The interpretation of the colorimetric reaction is the issue. Evidence adduced favors its being an acidometric test, but without any claims of parallelism existing between the degree of acidity and kidney function. Its non-irritating nature, non-toxicity, smallness of dose titled as virtues (Geraghty and Rowntree) are but of the negative variety. As for the information being accurate and precise, this is controverted by the theoretical, chemical, experimental and clinical evidence herein set forth and which forbids reliance on the extravagant claims of phenolsulphonephthalein as a funtional kidney test.

74. **Ross Jelly Film Method in the Diagnosis of Syphilis.**—The examination of blood for Ross bodies is not believed by Roddy to be as simple a procedure as has been reported; he insists that more than ten minutes should be devoted to the examination of a slide before it is declared negative; it is often difficult to differentiate these bodies from artefacts, sometimes impossible. The value of the test as an aid to diagnosis is greatly reduced by the occurrence of the bodies in the blood of non-syphilitic patients, or what amounts to the same thing, the occurrence of artefacts difficult if not impossible to distinguish from them.

If the bodies described by Ross as *Lymphocytozoa pallida* really are such, then Roddy claims they do not occur in non-syphilitic patients and our positive finding in non-syphilitic cases raises the question of the nature of the bodies found. It seems equally probable that the bodies described by Ross may not be living parasites, but products of human tissue acted on by toxin; that the toxin of syphilis causes this change very frequently, more frequently perhaps than most others, but that some other toxins also produce these bodies. The Ross bodies are present in the blood of most syphilitics and less frequently present in those suffering from other diseases. Their true nature has not been conclusively established, nor has it been shown that these bodies do not occur in normal persons.

Roddy is convinced that the Ross test is much inferior to the Wassermann test in the diagnosis of secondary and tertiary syphilis, and believes that the examination of material from suspected initial lesions for Ross bodies, in addition to examination for spirochetes, will be a valuable aid in differentiation of chancres and chancroids.

75. **New Method of Determining the Dust in Air and in Fresh Air Schoolrooms.**—After many experiments the following method has proved satisfactory to Todd in giving a positive objective answer to the question of how much dust there is in the air: A canton flannel disc, 2 3/16 inches in diameter, is placed in a receiver which has a round opening 1 inch in diameter. Through this, by means of a suction pump, 200 cubic feet of air are drawn. On removing the canton flannel disc we have the dust record. For the purpose of standardization a scale of ten gradations, from white to black, has been made. The pump used was a rotary quadruple bellows pump from a player piano. The United States Weather Bureau standardized the apparatus and found that 200 cubic feet of air are drawn through the apparatus in twenty-three minutes.

Todd is satisfied, since using this objective method of dust determination, that we have greatly underestimated the effect of breathing dust as a cause of ill health and disease.

Ohio State Medical Journal, Columbus

February, X, No. 2, pp. 69-81

80 Combined Dental and Nasal Treatment to Restore Normal Nasal Respiration. J. A. Thompson, Cincinnati.
81 Obstetrician and Prevention of Infant Mortality. A. Furrer, Cleveland.
82 Industrial Electricity as a Cause of Cataract. E. Lauder, Cleveland.
83 Cooperation of State Medical Societies in Public Health Education. E. S. Everhard, Dayton.
84 The Arneth Leukocytic Picture, Its Value in Prognosis of Tuberculosis. W. E. R. Schottstaedt, Toledo.

Pennsylvania Medical Journal, Athens

February, XVII, No. 5, pp. 311-422

85 *The Use of Massive Doses of Antitoxin. S. S. Woody, Philadelphia.
86 *Statistical Study of Hydrothorax; Its Diagnosis and Treatment. J. M. Anders, Philadelphia.
87 *Treatment of Pulmonary Tuberculosis by Artificial Pneumothorax. C. M. Montgomery and J. Speese, Philadelphia.
88 *Fresh-Air Treatment in Pneumonia. M. H. Fussell, Philadelphia.
89 Hot Pack and Continuous Hot Bath in the Treatment of Alcoholic Patients with Lobar Pneumonia. T. G. Simonton, Pittsburgh.
90 *Oral Sepsis. R. C. Rosenberger, Philadelphia.
91 Dental Aspect of Oral Asepsis. I. N. Broomell, Philadelphia.
92 Early Recognition of Mastoid Disease and Early Operative Procedures to Prevent Loss of Hearing. H. F. Pyfer, Norristown.
93 An Unusual Streptococcic Infection Complicating Double Pneumonia. M. D. Ritchie, Pittsburgh.
94 Philadelphia County Medical Society. C. A. E. Codman, Philadelphia.
95 Vesical Calculi Caused by Suture Material. C. M. Stimson, Philadelphia.

85. **The Use of Massive Doses of Antitoxin.**—The results Woody has noted, compared with results in cases which have

received smaller doses, are as follows: Much prompter disappearance of the local signs of the disease, i. e., the membrane. With the use of large doses we do not have a period of anxious waiting to determine whether or not a result has been achieved. Yet in severe or obstinate cases, he does not hesitate to repeat as often as necessary, the primary dose, even if it has been a very large one. At times he has found it to be an advantage to gauge roughly the amount of antitoxin that would appear necessary, and to give it in a number of doses within a stated time, say twenty-four hours. Such spaced doses do not give the reactions caused by doses repeated at longer intervals. The use of large doses more quickly overcome the toxemia of the disease, so that coincident with the change in the disease locally, there is a marked improvement in the patient's general condition which is noticeable in a very few hours. Late complications are lessened in frequency and severity. The use of massive doses, to a large extent, does away with those cases in which an apparent cure is followed by a return of dangerous and fatal symptoms. The rapid cures that result from the use of large doses are real and not apparent. It has been stated by some that large doses of antitoxin can neutralize in some measure toxic products already in combination with the tissues, but this is still open to question.

86. **Statistical Study of Hydrothorax; Its Diagnosis and Treatment.**—The incidence of hydrothorax in Anders' opinion is greater than has been supposed, particularly in chronic myocarditis associated with arterial sclerosis of either moderate or severe grade, and chronic interstitial nephritis. It is unilateral in 30 per cent. of the cases, according to his statistical investigations. Hydrothorax not uncommonly occurs without external edema. The condition is quite frequently overlooked, as shown by an examination of the postmortem records of the Philadelphia Hospital, especially when secondary to myocardiovascular changes. It is vitally important to a diagnosis of the condition to make a thorough physical examination of the thorax in every case in which the occurrence of hydrothorax is even a remote possibility, or in which such symptoms as dry cough and dyspnea are present. The best method of treatment Anders holds embraces the rational use of rest and cardiants, as well as aspiration, which should precede, as a rule.

87. **Treatment of Pulmonary Tuberculosis by Artificial Pneumothorax.**—Montgomery's own experience would, he says, keep him from recommending the use of artificial pneumothorax in the treatment of pulmonary tuberculosis in any but exceptional cases, which must be selected with the utmost care. Certain cases of hemorrhage offer the strongest indication for the treatment.

88. **Fresh-Air Treatment in Pneumonia.**—By fresh-air treatment Fussell means the patient should breathe air which is not superheated, and which has not been breathed before. Usually he spends the entire illness in a room with all the windows up, night and day, in all kinds of weather; or, much better, on a protected porch with one whole side open. This is to be carried out at all seasons of the year. If the patient is in a room it is much better that there should be at least two windows. This is an easy task in warm weather, but Fussell admits that it takes courage and firm conviction that we are right to keep a patient, seriously ill, during stormy weather, in a room which is cold and to the nurse uncomfortable, but it pays the patient. The patient in cold weatner must be carefully protected so that he will not feel uncomfortably cold. Without exception those patients who are conscious and able to express their thoughts say they are more comfortable. Even in cold, bitter weather they are not cold. They do not "catch cold." On the contrary bronchitis and coryza, if they exist, become less than when the patient is treated inside, and the temperature is of lower range. One sees nothing of the septic sweats, and other discomforts. Cyanosis and air hunger are less. In carrying out this treatment Fussell insists that the nurse must be taken care of. She should be wrapped up well with heavy boots, heavy underclothing, and a sweater in very cold weather. A skilled nurse is indispensable. Drugs, venesection, etc., are not specific, but they frequently must be used, and certainly save life frequently, but above all Fussell warns against being meddlesome.

90. Abstracted in THE JOURNAL, Oct. 25, 1913, p. 1563.

Southern Medical Journal, Nashville, Tenn.

February, VII, No. 2, pp. 87-170

96 *Cerebrospinal Meningitis with Special Reference to Certain Signs or Measures. R. Lyons, New Orleans.
97 Bacteriology of Cerebrospinal Meningitis. K. R. Collins, Atlanta, Ga.
98 *Cerebrospinal Meningitis with Report of Patient Treated by Introducing Serum into Lateral Ventricle. R. V. Martin, Savannah, Ga.
99 *Tuberculosis: Intestinal Planting in Childhood; Lung Harvesting Later. E. C. Thrash, Atlanta, Ga.
100 *Distinction Between an Infection by Tubercle Bacilli and Tuberculosis. M. E. Lapham, Highlands, N. C.
101 *Protection for Post-Sanatorium Tuberculous Patient. L. B. Morse, Hendersonville, N. C.
102 Diagnosis and Treatment of Tuberculosis. D. S. Wilson, Louisville, Ky.
103 Value of Rest—Physical and Mental—in Tuberculosis. W. J. Durel, New Orleans.
104 Some Phases of Tuberculosis Problem. W. R. Kirk, Hendersonville, N. C.
105 Secondary Infections in Tuberculosis. J. B. Rogers, Independence, Ia.
106 Medicinal Treatment of Bronchitis and Pneumonia. I. L. Van Zandt, Fort Worth, Texas.
107 Preventive Medicine and Hygiene. J. Y. Porter, Jacksonville, Fla.
108 Hemostasis During and Following Tonsillectomy. H. Dupuy, New Orleans, La.
109 *Use of Iodin in the Abdomen. J. A. Crisler and E. J. Johnson, Memphis, Tenn.
110 Preparation and Administration of Autogenous Vaccines. H. Henson, Jacksonville, Fla.

96. **Cerebrospinal Meningitis with Special Reference to Certain Signs or Measures.**—An analysis of twenty-one cases forms the basis of Lyons' paper. The patients were males, and all but two were colored. The average age was 23 years. There was but one child in the series (5 years). From the point of view of early diagnosis the eight measures analyzed by Lyons fall into the following order of importance: Lumbar puncture stands first among the special measures. The initial puncture established the diagnosis in 95 per cent. of the cases. Next in importance is rigidity of the neck. This could be demonstrated in 20 out of the 21 cases on first examination, or 95 per cent. Kernig's sign comes third. It was present on first examination in 90 per cent. of the cases and at some time during the disease in 100 per cent. The "neck sign" falls into fourth place.

Lyons found that Brudzinski's statement with regard to the relatively greater value of his "neck sign" over Kernig's sign in children does not hold good for adults. It was found positive on admission in 76 per cent. of cases and could be elicited at some time during the affection in 94.4 per cent. Brudzinski's contralateral (identical) reflex comes fifth on the list, being present on first examination in only 33.3 per cent. of the cases. It was positive at some time during the disease in 50 per cent. of the cases. Babinski's sign occurred in but three cases, or 11.6 per cent., at some time during the disease. In two of the cases it was positive on admission. Macewen's sign was found to be practically of no value in this series. It could be demonstrated in but one instance. This patient was the only child (5 years) in the group. The field of usefulness of this sign, as well as Babinski's, seems to be limited to meningitic affections of early childhood. Lastly, the presence or absence of the patellar reflexes was found to be of no apparent diagnostic or prognostic importance.

98. **Cerebrospinal Meningitis Treated by Introducing Serum into Lateral Ventricle.**—In the case Martin reports the treatment was by puncture of the left lateral ventricle, drainage and introduction of Flexner's serum into same. The patient was a boy 19 years old. Temperature on admission was 101 F., pulse 100, stiffness in muscles of neck, intense headache, and Kernig's sign was present. A lumbar puncture revealed purulent fluid which was found to contain *Diplococcus intracellularis meningitidis*. After drawing off some of the fluid, the usual amount of serum was injected into the canal and during the succeeding twenty-two days ten injections

were given. After each injection there was a temporary improvement in his general condition, the severity of the headache was only slightly improved. His temperature ran from normal to 105 F., mental condition gradually becoming more and more impaired; eyesight failing.

On the twelfth day of the treatment he lapsed into a mild coma, and was steadily losing weight; a general rigidity became very marked. The spinal fluid varied considerably in consistency, and at times it was fairly clear. The pulse remained fast. It was while in this apathetic condition that Martin determined to trephine and treat the patient as stated above. Accordingly, the skull was opened at a point in front of the bregma, 2 cm. from the midline, inserting the hollow needle downward and slightly backward about 5 cm., when the fluid under pressure was allowed to escape until it ceased flowing through the needle; then the usual dose of serum was introduced into the ventricle. A drain was inserted down to the dura, and wound closed in the usual way. The effect of this operation was very marked; his condition began to clear up immediately; temperature ran from subnormal to normal, and within two weeks after the operation the patient was discharged from the hospital cured.

99, 100, 101. Abstracted in THE JOURNAL, Dec. 20, 1913, pp. 2269 and 2270.

109. **The Use of Iodin in Abdomen.**—The authors use 2½ per cent. solution of iodin in alcohol, undiluted, and as soon as the incision is made and the cavity reached, if pus is discovered free in the peritoneal cavity, this solution is poured in immediately so as thoroughly to flood the infected area before any attempt is made to liberate the pathology. By this means they have learned not to fear a spread of infection through mechanical means. The amount of solution used is dependent on the extent of peritoneal infection; that is to say, if the contamination is partially or completely localized, two or more ounces may be sufficient to flood the field and render the necessary service.

If, however, there is a widespread infection or a diffuse, septic peritonitis, they retract the abdominal incision and elevate the parietes and literally pour the entire abdomen and pelvis full of this solution, taking great care to make sure that the drug reaches all of the fossae and recesses within the abdominal and pelvic cavities. This may require anywhere from 8 to 32 ounces or more of the solution. After the pathology is dealt with they take large towel sponges and gently insert these into the most dependent fossae and mop out the excess solution and debris, avoiding scrubbing and trauma. In every case they employ the usual drainage, Fowler position and Murphy treatment. If there is profound toxemia they also use saline hypodermoclysis and, when indicated, intravenous saline transfusion, in order more rapidly to eliminate the toxins. Their results are satisfactory to them.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Clinical Journal, London

January 14, XLIII, No. 2, pp. 17-32

1 Spina Bifida. R. A. A. Stoney.
2 Acute Intestinal Obstruction in Children. L. A. Parry.
3 Common Pitfalls in Physical Examination of Chest. C. Rivière.

January 21, No. 3, pp. 33-48

4 Syphilitic Affections of Bones in Childhood. D. C. L. Fitzwilliams.
5 *Common Forms of Alopecia and Their Treatment. S. E. Dore.

January 28, No. 4, pp. 49-64

6 Hemorrhage in Tonsil and Adenoid Operations. J. F. O'Malley.
7 Causes and Symptoms of Mucous Colitis and Its Treatment by Irrigation as Done at Harrogate and Plombières. A. Mantle.

February 4, No. 5, pp. 65-80

8 Two Cases of Retroperitoneal Rupture of the Duodenum. R. L. Knaggs.
9 Common Errors in Diagnosis in Diseases of Eye. E. Clarke.
10 Migraine and Eye-Strain. S. Stephenson.

5. **Common Forms of Alopecia.**—In seborrheic cases Dore believes that resorcin or salicylic acid, mercuric chlorid, sulphur and tar are the best drugs. In the majority of cases he uses a lotion such as the following:

	gm. or c.c.	
Hydrarg. chloridi corrosivi	.03—.12	gr. ss—ij
Resorcini vel acidi salicylici	.30—.60	gr. v—x
Olei lavand.	.06—.12	m j—ij
Olei ricini vel glycerini	.30—.60	m v—x
Spt. vini rect. ad	30	℥ j

If the scalp is dry the castor oil may be increased in quantity; if excessively greasy a solvent of fat such as ether or acetone may be added.

A spirit lotion is, he states, the best dressing for the hair of women; in men, water or weak spirit with glycerin instead of castor oil is sometimes preferable. Resorcin discolors white or very fair hair and salicylic acid should then be substituted. In severe cases an ointment may be required at first and may be rubbed in every night and washed off in the morning, or a small quantity applied once or twice a week after shampooing, that is:

	gm. or c.c.	
Naphthol β	.30—.60	gr. v—x
Sulph. præcip.	.60—1.20	gr. x—xx
Resorcini	.60—1.20	gr. x—xx
Ol. lavand.	.06—.12	m j—ij
Vaselini ad	30	℥ j

To this oil of cade, etc., may be added.

When seborrhea is not a marked feature, as in toxic and nervous cases, pilocarpin may be substituted for the mercuric chlorid in the first prescription or prescribed with ammonia or other stimulant, that is:

	gm. or c.c.	
Pilocarpini nitrat.	.30	gr. v
Liq. ammon. fort.	4	℥ j
Tinct. lavand. comp.		℥ j
Spt. vini. rect.	45	℥ iss
Aquam. ad	130	℥ vj

This lotion is also effective in slight degrees of seborrhea, because the ammonia forms a soap with the fat of the scalp. Other useful stimulants are chloral hydrate, acetic acid and cantharides; the last should be used with caution on account of its action on the kidneys. Internal medication should not be forgotten, especially in neurotic and anemic cases and the glycerophosphates, cod-liver oil, iron, strychnin and arsenic are of service.

Lancet, London

January 31, I, No. 4718, pp. 289-366

11 *Tuberculosis as Infective Disease. W. C. Bosanquet.
12 Present Position of Acute Appendicitis and Its Complications. H. Lett.
13 Trauma in Relation to Certain Aspects of Nervous Disease. C. M. H. Howell.
14 *Percutaneous Tuberculin Reaction. A. J. B. Leckie.
15 Case of Postoperative Osteomyelitis of Frontal Bone. W. G. Porter.
16 Case of Acute Tetanus with Recovery. V. E. Negus.
17 Vaccines from Standpoint of Physician. T. J. Horder.

February 14, I, No. 4720, pp. 435-512

18 Experimental Principles of Operative Treatment of Fractures and Their Clinical Application. E. W. H. Groves.
19 Common Errors in Diagnosis and Treatment of Diseases of Joints. A. P. Luff.
20 Case of Mitral Stenosis, Cardiac Thrombosis, Aortic Embolism and Gangrene of Both Legs. H. E. Symes-Thompson.
21 *New Method of Treating Chronic Coli-Cystitis and Other Bacterial Infections. C. Russ.
22 Errors of Refraction in Schoolchildren. A. S. Percival.
23 Case of "Spastic" Constipation. R. Gompertz.
24 Extra-Articular Ankylosis of Inferior Maxilla Due to Foreign Bodies in Scalp for Ten Years. W. MacDonald.
25 Case of Intussusception Treated by Enterectomy. E. G. Gauntlett.
26 Multiple Mesenteric Lipomas Causing Obstruction. S. Mort.

11. **Tuberculosis as Infective Disease.**—Bosanquet summarizes his paper as follows:

1. Infection with tuberculosis is wide-spread and takes place largely in infancy and early childhood. 2. It is partly due to bacilli derived from human sources, partly of bovine origin, but the former type greatly predominates. 3. Direct communication from one human patient to a healthy individual does not occur in adult life under good sanitary conditions, with the possible exception of a few instances in which there has been very close and prolonged contact. Under bad hygienic conditions direct infection may occur, children being specially susceptible. 4. The exact mode of transmission of the bacillus is unknown, but inhalation affords the simplest explanation, although the localization of the chronic form of the disease in the lungs is not in itself evidence of direct implantation there. 5. The chronic form of the disease met with in adults is due to their increased resistance, as compared with children who suffer from the acute variety of tuberculosis, and this increased resistance may be the result of early inoculation with sublethal doses of bacilli. 6. The outbreak of tuberculosis in later life may be due either to reinfection from without or to recrudescence of a latent focus of old infection. 7. A general rise in resistance has

been brought about owing to the wide dissemination of the disease among European nations, and the fall in the death-rate is largely due to this factor and to improved hygienic conditions.

From these conclusions Bosanquet deduces the practical moral that the most hopeful measures which can be taken with a view to combat the disease are such as are directed toward improving the general well-being, and especially the housing conditions of the poorer classes.

14. **Percutaneous Tuberculin Reaction.**—The ointment which Leckie employed consisted of tuberculin and anhydrous wool fat, according to Moro's formula. Usually the front of the chest was the site chosen, occasionally the abdomen if more convenient. A portion of ointment about the size of a pea was firmly rubbed in by the finger over about 4 square inches, the process taking thirty to sixty seconds; sometimes the skin was previously cleansed with ether. No dressing was applied.

Of his series of 400 cases, 96 presented unquestionable signs of tuberculous disease, comprising various lesions. Of these patients 33 reacted, leaving 63 tuberculous cases devoid of response. Out of 304 cases clinically free from the disease, 38 gave results; 9 of them were doubtful, 4 of which reacted. Twelve per cent. of reactions occurred in non-tuberculous individuals and over 34 per cent. in subjects of the disease. In pulmonary tuberculosis the results were bad; 34 out of 43 cases entirely failed to respond. In osseous tuberculous lesions only half the cases reacted. The majority of cases of tuberculous peritonitis failed. Out of 21 cases in which signs of morbidity were wanting the reaction appeared in 4; but the rheumatic cases did not give the large percentage of reactions which Leckie has observed with the von Pirquet test.

All the cases of enteric fever and pleural effusion gave negative results; 2 of the effusion cases had definite tuberculous signs. The best reactions were found in well-nourished individuals, especially children. In order to form a more close comparison between the von Pirquet reaction and the Moro test Leckie applied both in a series of 132 cases. Of these cases 51 were definitely tuberculous, but only 13 out of these reacted to both, and 20 failed to respond to either, but Leckie has never observed a tuberculous case which reacted to the ointment, fail also to react to the von Pirquet method. Out of cases clinically free from tuberculosis 6 responded to both tests, 50 failed to react to either. Whereas 23 reacted to the scarification only 2 non-tuberculous cases gave results with the ointment only.

From the above it is clear that the von Pirquet test gives a larger number of reactions among tuberculous subjects than the ointment test, but at the same time it gives a much larger number of false results among non-tuberculous individuals. These two skin reactions are much inferior to the ophthalmic test, which gives a large percentage of true results, while reactions in non-tuberculous subjects are not very frequent.

21. **Method of Treating Chronic Ulcers and Colicystitis.**—Since nearly all pathogenic bacteria move to the positive pole during electrolysis in sodium chlorid solution, Russ conceived the idea that they might be drawn out of ulcers and infected mucous membranes, etc., if a column of sodium chlorid were superimposed on the diseased area and a current passed in the appropriate direction. If the positive pole were submerged in such a column of saline and the organisms drawn to it by the current, then, as the tissues became free from the bacteria, recovery would ensue. Incidentally also the bacteria would be killed during the process. In 1911 Russ commenced this study by applying the above-mentioned ideas to chronic varicose ulcers of the legs. The majority were healed. The largest was about 5 by 3 inches, and the smallest about 1 inch square.

The method used was as follows: A varicose ulcer was encircled by a special glass vessel larger than its area and fixed in a watertight manner to the surrounding healthy skin. The vessel was nearly filled with saline solution, and furnished with a submerged anode of platinum foil. An electric current was passed from the calf resting on a wet cathode pad (bolster) through the limb, traversing the ulcer to reach the overhanging anode. In this way the bacteria in the ulcer were expected to migrate to the anode, and if they left the ulcer or were killed it would be free to heal. Many experiments as to the amount and duration of current passed were made until favorable results were usually obtained.

Next Russ tried the method in colicystitis. After voidance of any urine the patient reclined on a couch, and a broad abdominal belt of layers of lint was passed round the lower part of the trunk. This belt, which carried a core of metallic gauze, was wrung out with warm salt solution before application. Next a rubber catheter, furnished with several perforations round its eye, was passed into the bladder. The free end of this catheter was connected to 8 inches of glass tubing, which in turn was joined by a short length of rubber tubing to a glass funnel—everything being sterilized. A few ounces of the salt solution (2 per cent.) were next passed into the bladder, and the glass tubing, after disconnection from the funnel, was clamped a little above the level of the pelvis. A platinum wire 6 to 8 inches long was next passed down the catheter to within 2 inches of its eye. This wire was connected to the positive and the core of the belt to the negative poles of the electric battery. The fluid in the bladder rose and fell in the glass tubing with the respiratory movements and its movements served as an indicator that the catheter eye was within the vesical cavity. A constant current was now gradually turned on to a magnitude of 3 to 5 milliamperes, and was allowed to run for 20 or 30 minutes. Russ also tried another reagent, iodic acid in a strength of 1 to 1,500, the wire now being the cathode, and with very good results.

Practitioner, London

February, XCII, No. 2, pp. 157-309

27 Oral Sepsis in Relationship to Septic Anemia. W. Hunter.
28 State Registration of Venereal Diseases. L. Guthrie and Others.
29 Symptoms, Diagnosis and Treatment of Hemic Infections of Kidney. C. A. R. Nitch.
30 Injuries of Back. A. S. Morley.
31 Diabetes and Its Treatment by Means of Physical Agents. J. Rivière.
32 Treatment of Harelip and Cleft Palate. H. Blakeway.
33 Recent Work on Diseases of Nervous System. H. C. Thomson.
34 Recent Work on Radio-Therapeutics and Electro-Therapeutics. N. S. Finzi.
35 Some Continental Methods of Treating Syphilis. J. L. Bunch.
36 Intra-Venous Injections in Blackwater Fever. H. E. B. Bruce-Porter.
37 Hay-Fever. A. G. H. Lovell.
38 Pulmonary Tuberculosis and its Vicious Circles. J. B. Hurry.
39 Mental Suggestion by Transference. A. Douglas.

Annales de Médecine et Chirurgie Infantiles, Paris

February 1, XVIII, No. 3, pp. 69-104

40 Manual Training in the Medical Course. (L'éducation manuelle du médecin.) A. Broca.
41 Choreiform Manifestations in Epidemic Poliomyelitis. (Paralysie infantile choréique.) A. Netter and L. R. Dumas.
42 Instantaneous Radiography in Diagnosis of Pulmonary Tuberculosis in Infants. L. R. Dumas, Mangot and A. Weill.
43 Helminthiasis. (Traitement des oxyures.) M. Perrin and G. Théry.

Archives Générales de Médecine, Paris

January, XCIII, No. 1, pp. 1-96

44 *Symptoms Suggesting Exophthalmic Goiter in the Tuberculous. (Le petit basedowisme chez les tuberculeux.) C. Sabourin.
45 Treatment of Laryngeal Tuberculosis. (Sur un nouveau procédé de traitement de la dysphagie dans la tuberculose laryngée.) A. Sauiquet.
46 Injection of Antiseptic Gas into Pleural Cavity. L. Billon.

44. **Symptoms Suggesting Exophthalmic Goiter in the Course of Tuberculosis.**—Sabourin called attention in 1910 to the frequency of symptoms suggesting instability of the nervous and cardiovascular systems in the course of pulmonary tuberculosis. He here discusses the special form of this which he calls *petit Basedowisme*. The main features are the prominence and luster of the eyeballs, increased size of the neck, and general nervousness, especially a constant restlessness. Attacks of diarrhea may come and go, independently of the diet and rebellious to treatment, sometimes accompanied by signs of congestion of the liver. In other cases a tendency to hemorrhages dominates the clinical picture, epi-

staxis, bleeding in the throat, hemorrhoids, or hemoptysis and disturbances in menstruation. This angioneurotic tendency has a marked aggravating influence on the course of pulmonary tuberculosis, and the lung process may become attenuated or heal entirely as the irritable and unstable nervous system is soothed and steadied. The nervous instability is brought on or aggravated in the predisposed by defective elimination of waste, by overwork, mental or physical, by worry or any cause that depresses the vitality. With rest and proper hygiene, avoidance of meat for a time, the local and general symptoms subside together and a complete cure may follow.

Archives Mensuelles d'Obstétrique et de Gynécologie, Paris

January, III, No. 1, pp. 1-160

47 *Connection between the Genital Development and Pathology of the Hair. R. Sabouraud.
48 *Resection of Vein in Treatment of Ovarian-Tubal Varicocele. L. Sencert.
49 Cysts in Uterine Cervix. C. Dambrin.
50 The Blood-Vessels of the Pregnant Uterus. (La Zone d'Inclusion de l'Utérus Gravide.) P. Bar.
51 Midwives in England. M. Lemeland.

47. Connection Between the Sexual Development and the Hair.—Sabouraud has been studying for twenty years the pathology of the scalp, and states that there can be no doubt that the falling of the hair and the growth of the hair are linked with physiologic genital development. Physicians have too long disregarded this branch of physiology in animals, especially the "love plumage" of birds. The yard-long tail-feathers of the peacock, for example, sprout and fall in the six months which include the rutting period. He has found that after a hair has been detached it does not drop out until seventy-five or ninety days later. This delay explains why some women who are liable to habitual losses of hair find at the third month of pregnancy that their hair is unusually thick, and that the dropping out does not begin anew till three months after delivery. He says that children, women and, apparently, eunuchs never become bald like men. The tendency to baldness, he adds, makes itself manifest between 17 and 22, and it is always well defined before 30. The ancient Grecks represented satyrs as bald, but with thick youthful hair elsewhere, showing that the baldness was premature. There are certain affections of the scalp which develop exclusively in children, such as tinea tonsurans; this always subsides at about puberty. The adult scalp seems to be invulnerable to this form of tinea. The women and men whose hair is inclined to drop out are generally those with a tendency to profuse growth of hair elsewhere. Aristotle asked, centuries ago, why men alone become bald.

48. Varicocele in the Female.—Sencert has encountered a number of cases of varicocele in the broad ligament, as he describes in detail. The disturbances which it causes have nothing characteristic, merely irregular neuralgic pains in the abdomen and pelvis, aggravated by standing and walking, relieved by reclining and growing more severe as the menstrual period approaches and subsiding as the menstrual flow begins. Menstruation is also liable to be irregular. Women with pelvic varicocele have generally borne several children and then had one or more abortions. If the possibility of varicocele is borne in mind, it can generally be palpated; in one case the weight caused it to sag into the pouch of Douglas. He advises resection of the vein affected. The article is illustrated.

Bulletin de l'Académie de Médecine, Paris

January 27, LXXVIII, No. 4, pp. 93-156

52 *Petrolatum Administered Internally, especially to Combat Constipation. A. Manquat.
53 Condensed Milk in Infant Feeding. P. Lassablière.

February 3, No. 5, pp. 157-200

54 Operative Treatment of Lamellar Cataract. (Cataracte zonulaire.) F. de Lapersonne.

52. Mineral Oils for Internal Use.—Manquat discusses the use of liquid petrolatum in treatment of all conditions in which the physical properties of olive oil have been found of advantage. When chemically pure, the mineral oil seems to be non-toxic in therapeutic doses. Taken fasting, it does not seem to be absorbed and consequently its physical and mechanical action is exerted throughout the entire intestinal tract, contrary to vegetable and animal oils which are digested and absorbed along the way. The mineral oil modifies the bowel content, facilitating its progress and expulsion. It not only lubricates but has a soothing action on spasmodic contraction, and retards intestinal absorption. It seems plausible that the petrolatum may have a healing action on lesions in the intestine the same as on external lesions. He outlines its field as constipation in all its forms but above all when it is accompanied by irritation or spasm of the intestine; in cases of hemorrhoids, prostatic enlargement, muco-membranous enteritis, liver disease, backward displacement of the uterus, chronic appendicitis, after abdominal operations, and in hyperchlorhydria and its consequences. (The question of absorption of mineral oils taken internally was discussed editorially in THE JOURNAL, Feb. 28, 1914, p. 638.)

Journal de Chirurgie, Paris

January, XII, No. 1, pp. 1-144

55 Ligation of Veins in the Pelvis. (Contribution à l'étude de la ligature des veines iliaques internes.) R. Proust and A. Maurer.
56 Spinal Anesthesia. (Rachianesthésies lombaires à la novocaine.) S. Mercadé.
57 Battle-Field Surgery. (Quelques faits de chirurgie de guerre). G. Pascalis and G. Clarac.

Journal de Médecine de Bordeaux

February 1, LXXXV, No. 5, pp. 75-90

58 Internal Ear Disease plus Cerebellum Disease. (Syndrome labyrinthique et syndrome cerebelleux.) Creyx.
59 Subconjunctival Hemorrhage Following Sudden Arrest of the Menses. C. Lafon.

February 8, No. 6, pp. 93-106

60 Passage of Tubercle Bacilli into the Milk of Tuberculous Women. B. Auché.
61 Fracture of the Head of the Femur. J. Duvergey.

Presse Médicale, Paris

January 28, XXII, No. 8, pp. 77-84

62 Technic for Tonsillectomy in Adults. (L'amygdalectomie.) H. Luc.
63 Efficacy of Iodin Treatment of Exanthematous Typhus. Outtugeanimoff.
64 Cultivation of the Virus of Rabies. G. Volpino.

January 31, No. 9, pp. 85-96

65 Intubation of the Esophagus. M. Guisez.
66 Cultivation of Tissues outside of the Organism. C. Champy.
67 *The Syndromes from Excessive Permeability of the Kidneys. A. Martinet.

February 4, No. 10, pp. 97-104

68 *Induced Fever in Treatment of Progressive Paralysis. (Le traitement moderne de la paralysie générale progressive selon la methode de von Wagner.) A. Pilcz.
69 Treatment of Scoliosis. P. Desfosses.

67. Excessive Permeability of the Kidneys.—Martinet reports several cases of different types of abnormal permeability of the kidneys. In one the kidneys seem to be abnormally and excessively permeable to water, albumin and salts but not to uric acid. The albumin eliminated ran up to 8 or 10 gm. and the patient, a man of 61, previously healthy except for a recent attack of influenza, speedily wasted away, dying in about six months. In contrast to the acute course in this case, the second patient, a woman of 53, after an obscure acute infectious disease in 1911 gradually developed signs of hyperpermeability of the kidneys and debility slowly progressive to date. Neither of the patients at any time showed any tendency to edema or signs of uremia. In a group of six other cases the hyperpermeability of the kidneys suggests possible diabetes insipidus in some. In all, the overthrowing of the barriers of the kidneys seems to have been the primary trouble; the subnormal blood-pressure and debility are secondary. The findings in the above eight cases are tabulated in detail for comparison.

68. Mercury-Tuberculin Treatment of Progressive Paralysis.—Pilcz here describes the method of treating paresis introduced by Wagner von Jauregg which aims to induce fever artificially, hoping thus to modify the paresis just as an intercurrent febrile infectious disease has been known to modify favorably certain other affections. The experiences to date with the method were reviewed in these columns Feb. 21, 1914, p. 656, all apparently indicating that the remissions in the disease

occurred with greater frequency than otherwise and that the remissions were more complete and lasted longer.

The aim being to induce fever, the dose of tuberculin is pushed rapidly from a fraction of a milligram up to 0.01 gm. and is then gradually increased to a final dose of 1 gm. of Koch's old tuberculin. The temperature is taken every three hours, and if there is no febrile reaction the last dose is doubled. If the temperature goes up one degree Fahrenheit the dose is increased by one-half; if more than two degrees, the last dose is repeated. Among Pilez' eighty-six patients thus treated, 26.68 per cent. recovered so completely that they were released from legal guardianship and another 10 per cent. resumed their ordinary life; 23 per cent. showed no improvement but their condition has remained stationary during the years since, while 39.44 per cent. did not seem to be influenced by the treatment in any way. Mercury is given on alternate days with the tuberculin. Pilez states further that in looking over the records of 4,134 military officers who had contracted syphilis between 1880 and 1889 he found that 4.7 per cent. have developed general paralysis since, but none of the officers who passed through malaria, erysipelas or other febrile disease during the first few years after their syphilis has developed paresis. No history of a febrile affection of any kind could be discovered in the anamnesis of those with paresis. In conclusion Pilez reiterates that the fate of the patient is in the hands of the general practitioner who sees him when the paresis is just beginning to make itself manifest. Prompt measures then may ward off much trouble in many instances.

Revue Pratique d'Obstétrique et de Gynécologie, Paris

January, XX, No. 1, pp. 1-28

70 Management of Delivery of Monsters. (Rôle de l'accoucheur en présence de quelques monstruosités foetales portant sur l'extrémité céphalique.) L. Simon.
71 Treatment of Ovarian Tumors in Pregnant Women. P. Puech and J. Vanverts.

Semaine Médicale, Paris

February 5, XXXIV, No. 5, pp. 59-60

72 *Tabetic Dyspepsia. M. Loeper and R. Oppenheim.
73 Solitary Retroperitoneal Enlarged Tuberculous Lymph-Node. (Le bubon strumeux iliaque d'emblée.) F. Lejars.

72. **Tabetic Dyspepsia.**—Loeper and Oppenheim describe several typical cases of stomach disturbances in tabetics which stopped short of actual gastric crises or which may be regarded as attenuated and prolonged equivalents. The disturbances may pass through the phases of deranged digestion, then mild to violent pains exaggerated by eating, with possibly a terminal period of torpor and atony; this succession, this alternance of disturbances, imprints a special stamp on them as the tabes itself. The progressive atrophy of the fibers of the sympathetic nerve upsets the balance in the innervation of the stomach and leaves the vagus in predominant control. The unchecked action of the vagus on the musculature of the stomach may generate actual chorea of the stomach and spasm of the inlet and outlet. These phenomena cause pain as long as the sympathetic nerve is functioning; they disappear when the vagus itself yields to atrophy and paralysis. The gastric crisis seems to be the result of an attack of subacute meningoradiculitis; the dyspepsia results from a chronic and progressive form of the same. The former is the manifestation of the brutal excitation of all the sensory elements of the solar plexus. The dyspeptic condition is the result of the progressive exhaustion of this same plexus and the uncontrolled predominance of the vagus in the innervation of the stomach. The above views suggest treatment by belladonna and atropin to control the vagus, supplemented by all the measures found useful in soothing nervous irritation. Clinical experience is confirming the efficacy of this when there is still a chance for any improvement in the condition.

Berliner ylinische Wochenschrift

February 2, LI, No. 5, pp. 193-240

74 *Radiotherapy of Cancer. (Weitere Erfahrungen über Carcinombestrahlung.) E. Bumm. (Zur Röntgentechnik der Carcinombestrahlung.) Warnekros. (Weitere Erfahrungen über die Mesothoriumbestrahlungstherapie bei Carcinom.) A. Pinkuss. (Einwirkung von Thorium X-Injektionen auf die Agglutinine.) E. Fränkel and F. Gumpertz.
75 Dangers of General Anesthesia with Isopral by the Rectum. P. Kleinschmidt.
76 *Yeast plus Boric Acid for Local Treatment of Acne. H. Buchholtz.

74. **Roentgen Treatment of Cancer.**—It is about eighteen months since Bumm began systematically to treat uterine cancers with the Roentgen rays, and he states that his experience has convinced him that the future of the treatment of cancer lies in this form of radiotherapy. He has been able with a brief course of it to destroy cancers to a depth of 3 cm. and he adds that improvements in technic may permit action to a depth of two more centimeters. When this is accomplished we have realized all that can be hoped from operative removal of the growth. In ten cases in his experience the tumor was absolutely or relatively inoperable, but under the Roentgen exposures the cancer was completely cured. Even if no further improvement is realized, he reiterates, the progress already realized is a long stride forward. He applied the Roentgen treatment in five operable cases with complete cure in all; nothing pathologic can be detected now at the point of the malignant proliferation, and neither during the course of treatment or later has there seemed to be any injury otherwise. One carcinoma of the urethra reaching up into the bladder seems to be completely cured. One patient with vaginal carcinoma has died of recurrence, and no appreciable influence from the treatment was apparent in a case of carcinoma of the bladder. In six cases of recurrence after operative removal of a carcinoma of the cervix there is no trace of the recurrence now in one case and in the others the tumor has shriveled to a small hard lump. Complete recovery can also be reported in two cases of primary and two of recurring mammary carcinoma; in a third case of recurrence the treatment was unable to prevent the spread of the disease. Bumm's experience with radium and mesothorium has not been favorable; they induced local and general injury in nearly every case in which they were applied to act on deep cancer; he restricts their use now to local application to the primary focus. They have to be applied close to the tissues and are liable to burn while the Roentgen tubes, acting from a distance, are compratively free from this danger.

Warnekros describes the technic which Bumm has been using, and gives an illustration of the method found most effectual, cross-fire from two Roentgen tubes applied to the abdomen and one in the vagina.

76. **Acne.**—Buchholtz states that he has been quite successful in a number of cases of obstinate acne with rubbing into the skin a powder consisting of equal parts yeast and boric acid, after the skin has been softened by thoroughly rubbing in a thin layer of boric acid salve. Once a day is sufficient. He sometimes made the powder with two parts yeast to only one part boric acid.

Correspondenz-Blatt für Schweizer Aerzte, Basel

January 31, XLIV, No. 5, pp. 129-160

77 Present Status of Treatment of Gastric Ulcer. (Das runde Magengeschwür.) A. Huber.
78 Bacteriologic Examination of Tuberculous Urine. J. Ledergerber and J. Baur.

Deutsche medizinische Wochenschrift, Berlin

January 29, XL, No. 5, pp. 209-264

79 *Treatment of Dyspnea. J. A. Grober.
80 Chemotherapy of Experimental Trypanosomiasis. W. Kolle, O. Hartoch and W. Schürmann.
81 *Harmless Diabetes in the Young. (Ueber den Diabetes innocens der Jugendlichen, zugleich ein Beitrag zur Frage des renalen Diabetes.) H. Salomon.
82 *Diagnosis of Insufficiency of Pulmonary Valve. E. Rehfisch.
83 Large Tumor in the Pleura. H. Dorendorf.
84 Ascarides in the Bile Passages. R. Pflugradt.
85 The Tuberculin Skin Reaction in Children. N. F. Küchenhoff.
86 Inhalation of Oxygen in Disease of the Respiratory Organs. (Ueber medikamentöse Sauerstoff-Inhalation bei Erkrankungen der Atmungsorgane.) A. Brackmann.
87 *Industrial Diseases. (Fortschritte in der Lehre von den Gewerbekrankheiten.) Holtzmannn and Koelsch. Commenced in No. 4.
88 *Modified Technic for Insufflation Anesthesia. E. Jeger.

79. **Treatment of Dyspnea.**—In this tenth article on sudden threatening conditions to which the physician may be called with or without any previous knowledge of the patient, Grober discusses acute dyspnea. He first warns that no matter how pressing the danger, symptomatic treatment of the suffocation must invariably be preceded by a brief study of the patient and history of the case. The treatment of dyspnea must first of all be the removal of the cause and a great variety of causes may be responsible for it. It is important to examine the throat at once either directly or with the laryngoscope. All children should be systematically trained to permit this. It is well also to examine the throat with the finger. He protects the finger by wrapping a handkerchief around the root, but warns for special care with diphtheria as he acquired in this way a local diphtheria from his finger being bitten by the child. The finger may discover a hidden retropharyngeal abscess, edema of the glottis or spasm of the vocal cords, while the retching and coughing which follow digital exploration may expel some unsuspected foreign body or diphtheric membrane.

If the dyspnea comes from a pleuritic effusion or pneumothorax, this is easily remedied by puncture. If the cardiovascular system is responsible for it, intravenous injection of digitalis will ensure better circulation through the lungs and remedy the lack of oxygen; oxygen may be given directly in case of anemia, or transfusion of blood may answer the indications. In case of venous congestion, venesection may be the one thing needed. The dyspnea may be the result of accumulation of secretions in the bronchial tubes which the patient is unable to cough out, and here ipecac or antimony and potassium tartrate in not too small doses every ten minutes may be needed. He adds that it is not generally known what an excellent expectorating effect can be obtained from cooling baths followed by a cool douche. This acts especially on the expectoration from the finer ramifications. The physician must not be deceived in these cases by the cyanosis during the expectoration; it is only the consequence of the powerful movements of expiration during the coughing and it is briefly transient. Even when convinced that the patient is a hysteric, one must not forget that there may still be some organic cause for the dyspnea. Standing and raising the arms helps to expand the lungs; wet cupping or ice bags, rubbing with alcohol or painting with tincture of iodin, may help to relieve dyspnea from an inflamed pleura; sometimes it helps to strap down the affected side of the chest with long strips of adhesive plaster. Patients frightened by their sudden suffocation are liable to be restless and use up their supply of oxygen faster than need be, breathing fast instead of the slow deep respiration required—the physician's tranquilizing influence is of great importance, and he may find hot or cold applications to the chest, rubbing, etc., useful for their suggestive influence. Not every attack of dyspnea requires narcotics, but in very severe dyspnea the patient's distress can be materially relieved thereby.

81. **Harmless Diabetes in the Young.**—Salomon states that he has encountered a number of cases of mild diabetes in persons between 10 and 20 which remained mild and stationary and the proportion of sugar in the blood persisted within normal range. Another feature of the cases was their familial character, and that the patients generally had signs of a neuropathic taint. The glycosuria keeps below 1 per cent. except when the proportion runs up after some casual excitement, and it seems to be independent of the ordinary diet Even after intake of 100 gm. of grape sugar, no more than 10 per cent. is eliminated, and generally not more than 1, 3 or 7 per cent. We can be sure that a mixed diet can do no harm in this *diabetes innocens* or renal diabetes, but he warns expressly against permitting the ordinary diet as it is human to err, and we are never sure at first that the diabetes is of this harmless character, while, on the other hand, a person with this type of diabetes may acquire true diabetes like any one else. Consequently it is best to restrict the diet to a certain extent as for true diabetes until the course through years has demonstrated its non-progressive nature. He describes in detail thirteen such cases, three in one family. The importance of recognizing the harmless character of the glycosuria is emphasized anew by the experience in several of them as their physicians had warned against matrimony, etc. None of the patients had heeded this warning, however, but their lives had been saddened for years unnecessarily by the grave prognosis which had been dealt out to them.

82. **Diagnosis of Pulmonary Insufficiency.**—Rehfisch says that when the diastolic murmur is not accompanied by hypertrophy of the left ventricle, capillary pulse and high amplitude, aortic insufficiency can be excluded; in health, the amplitude, or size of the pulse-wave, averages 40 mm. mercury while in 66 per cent. of all his cases of aortic insufficiency it ranged above 80 mm., and in all other forms of heart disease, including myocarditis and cardiac neuroses, it averaged only 5 per cent. The lack of high amplitude thus tends to exclude aortic mischief. When the diastolic murmur is not accompanied by any other signs of valvular disease or history of endocarditis or syphilis, and the outline of the heart is normal and the somatic disturbances slight, and if the diastolic murmur is audible only as the patient reclines or as he stands, then we can confidently assume that the diastolic murmur in this case is merely accidental and without pathologic significance. If we hear a systolic murmur, the patient reclining, and if this murmur is audible exclusively at the apex and in a narrow zone beyond, and is not transmitted to the base, and if, further, the second pulmonary sound is strikingly prominent, we can be confident that the murmur will not be audible when the patient stands erect and the second pulmonary sound will also have lost its accentuation and the second aortic sound will predominate above it. The accidental diastolic murmur is of a lighter tone and briefer than an organic murmur, but its chief characteristic is also its change as the patient lies or stands, and its temporary disappearance. He encounters this accidental diastolic murmur not oftener than about twice a year, and among 3,000 patients with organic heart disease he has found but 9 with actual organic pulmonary insufficiency. In Barié's report on the necropsies in 58 cases of pulmonary insufficiency, 22 of the patients were over 30, including 10 between 50 and 75. In a number of the patients the valvular defect had existed for many years without much disturbance.

87. **Industrial Diseases.**—This instalment closes the review of the present status of knowledge in regard to occupational affections and intoxications and means of prevention. It is the work of the Obergewerbearzt and Landesgewerbearzt of Bavaria, that is, the official medical advisers in this branch of medicine.

88. **Modified Technic for Insufflation Anesthesia.**—Jeger gives an illustrated description of a device which he thinks does away with the drawbacks of the Meltzer-Auer technic. It is a combination of the Meltzer method, Tiegel's technic for general anesthesia under positive atmospheric pressure, and Kuhn's method of intubation of the upper air passages. A two-way tube is used, one branch of which contains a fine ureter catheter whose tip projects through the wall of the tube into an inflatable rubber bag. When the bag is inflated, the lumen of the trachea is completely closed outside of the two-way tube. One of the branching outer ends of the tube is connected with the oxygen tank, the other enters a jar partly filled with water, which automatically controls the pressure in the tube to conform with the pressure from the oxygen tank which is under control at all times.

Medizinische Klinik, Berlin

February 1, X, No. 5, pp. 183-228

89 *Causes and Treatment of Uterine Hemorrhage. L. Adler.
90 *Influence on Rat Tumors of Serum Containing Ferments Protecting against Some of the Tumor Elements. (Vorläufige Mitteilung über die Beeinflussung von Rattentumoren durch Serum, das Fermente enthält die auf einzelne ihrer Bestandteile eingestellt sind.) E. Abderhalden.
91 Combined Radiotherapy in Gynecology. F. Heimann.
92 Bile Salts in Treatment of Gastric Hyperacidity. (Behandlung der Hyperacidität des Magens, speziell bei ulcerösen Prozessen mit gallensauren Salzen.) K. Glaessner.

93 Significance of the Symptoms from Tuberculous Bronchial Lymph Nodes. W. Golz.
94 Study of Certain Plants Poisonous for Some People. (Giftwirkungen von Rhus toxicodendron—Giftsumach—und der Primula obconica, nebst Bemerkungen über Rhus vernicifera —Lackbaum.) E. Rost. Commenced in No. 3.
95 Care of the Feet. (Zur Versorgung wunder Füsse.) K. Dreist.
96 Inheritance of Acquired Characteristics. (Die sogen. Vererbung erworbener Eigenschaften.) F. Lenz. Concluded in No. 6.

February 8, No. 6, pp. 229-268

97 Cesarean Section. (Kaiserschnitt.) E. Opitz.
98 Estimation of Functional Capacity of Kidneys. (Funktionelle Diagnostik der Nierenkrankheiten.) T. Janowski.
99 End-Results of Operative Treatment of Habitual Dislocation of Patella. (Verrenkung der Kniescheibe.) O. Vulpius.
100 Thread-Test of Conditions in the Stomach. (Ueber die Einhornsche Fadenprobe.) M. Wilenko.
101 Artificial Nose. (Nasenersatz bei Lupus vulgaris.) O. Salomon.
102 Curative Influence of Alkaline Applications to Furuncles on Diabetics. A. Brunner.
103 Influence on School Work of Physical Abnormalities. (Beeinflussung der Schulleistungen unserer Volksschulkinder durch körperlicher Störungen.) Peters.

89. Uterine Hemorrhage.—Adler writes from Schauta's clinic at Vienna to reiterate that palliative measures should never be applied in treatment of uterine hemorrhage until after malignant disease has been positively excluded. Treatment should of course be causal and the type of the hemorrhage is of great diagnostic importance. With extra-uterine pregnancy, the course is generally either that after a normal menstruation of the ordinary four-day type the following menstruation is retarded several days and then extends over a week or more, or it may occur a few days before the regular period and keep up for two weeks or more, or it may commence at the regular period but keep up for a long time. The hemorrhage is less profuse than at an ordinary menses but it keeps up for days and weeks without interruption, and there is slight discomfort or pain in the side of the abdomen. Conservative treatment is entirely out of the question when extra-uterine pregnancy is once certain, he declares. His research has confirmed the assumption that endometritis has nothing to do with uterine hemorrhage; the uterus proper is seldom responsible for the hemorrhage; the ovaries or reduced coagulating power of the blood, the effects of constipation, tight lacing, a sedentary mode of life, abnormal sexual excitement or emotional stress are more likely to be the factor or factors involved, inducing irregular menstruation or prolonging and exaggerating normal menses. Local treatment of the uterus has therefore lost ground in favor of causal measures; the curet has lost its vogue since it has been shown that it had a curative influence in only 10 per cent. of 500 cases of uterine hemorrhage compiled by Busse. Mere bed rest alone may control uterine hemorrhage in women nearing the menopause and in young girls. In other cases a change of climate by improving the general health has cured the tendency to hemorrhages. Out-of-door life at a moderate altitude, saline and chalybeate baths may prove useful while mud baths often have a directly injurious action. Keeping the bowels open by proper dieting is of the greatest importance. The Roentgen rays have proved their usefulness in treatment of bleeding myomas, but it must be borne in mind that they act only on one symptom, the hemorrhages; the symptoms from traction by adhesions or pressure on adjacent organs are not influenced, and the danger of cancer is present in from 5 to 10 per cent. at least of all cases of uterine myoma. If roentgenotherapy is applied it should be only under the constant control of the gynecologist. Adler remarks of radium treatment that the dangers from it are so great and it is so impossible to reckon with them beforehand, that this method of treatment cannot even be suggested for uterine hemorrhage.

90. Production of Protective Ferments to be Used in Treatment of Cancer.—In this preliminary communication, Abderhalden describes some experiences which suggest the possibility that a prepared serum may be produced which will contain protective ferments able to digest cancer tissue and thus cure malignant disease. He suggests that the reason why such experiments fail in the test-tube is because there is no generation of protective ferments such as occurs in the living body under favorable conditions. The serum of his rabbits and dogs did not affect tissue from a rat sarcoma; then the animals were injected intravenously with an extract of the rat-sarcoma tissue. Twenty-four hours afterward their serum was found to have acquired the property of digesting the rat-sarcoma tissue, showing that protective ferments had been produced in consequence of injection of the tissue extract in question. Injection of this serum into the rat from which the sarcoma tissue had been derived, was followed by the gradual subsidence of the sarcoma after from three to six such injections. He has succeeded in causing the subsidence in this way of ten such tumors. These experiences harmonize with those of Fichera and others in regard to the curative action of autolysates of cancers. But Abderhalden thinks that equally effectual results can be obtained, while avoiding possible by-effects and other drawbacks, by transferring the task of protective-ferment production to a third organism, the horse, for instance. Experiments in this line are now under way.

Münchener medizinische Wochenschrift

February 3, LXI, No. 5, pp. 225-288

104 Radiotherapy in Gynecology. (Zur Strahlentherapie in der Gynäkologie.) M. Henkel.
105 *Jaundice, Especially as Sign of Extra-Uterine Pregnancy. (Ikterus.) H. Schottmüller.
106 *The Dialysis Test as Key to Clinical and Biologic Problems. (Notizen über die Verwertbarkeit des Dialysierverfahrens bei klinischen und biologischen Fragestellungen.) E. Abderhalden.
107 Adsorption Phenomena as Source of Error in the Dialysis Test. (Adsorptionserscheinungen bei dem Abderhaldenschen Dialysierverfahren.) E. Plaut.
108 Precipitating Action of Serum with Lipoids of Tubercle Bacilli. L. Preti.
109 One Dose of Emetin Cures in Case of Dysentery from Lamblia Intestinalis and Spirochetes. M. Mayer.
110 *Bacteriologic Control of Stools in Healthy Soldiers. (Eine Massenuntersuchung Gesunder auf pathogene Keime im Darm.) G. Mayer.
111 Only Eleven Per Cent. of 1,433 Syphilitics at Hamburg, 1908-1912, Took Adequate Treatment. C. Philip.
112 *Pain in Groin in Young Men. (Inguinalschmerz bei jungen Männern.) Sporl.
113 *Endemic Goiter. (Studien über den endemischen Kropf.) L. Hirschfeld and R. Klinger.
114 The Tampon in Obstetrics and Gynecology. F. Weber. Commenced in No. 4.
115 "Second Sight." (Das zweite Gesicht.) W. Weber.

105. Tendency to Jaundice as Sign of Extra-Uterine Pregnancy.—Schottmüller emphasizes the important information to be derived from chemical and spectroscopic examination of the blood serum in cases of jaundice of obscure origin. The discovery of hematin in the blood serum served to confirm the suspicion of a ruptured extra-uterine pregnancy in one of the cases he relates. The spectroscope revealing the hematin indicated the necessity for an immediate operation, which was followed by speedy recovery; the history and palpation findings had suggested a benign ovarian cyst. In two other cases the small proportion of hematin, while confirming the diagnosis of extra-uterine pregnancy, yet showed that there could not have been much extravasation of blood, and both the patients recovered without complications or operation. He has encountered four cases of jaundice with extra-uterine pregnancy in the last year; the tendency to jaundice was evident only in the conjunctivas, but this was enough to suggest the hematinemia, and the spectroscope confirmed it. Urobilin was evident in the urine in some but not all of the cases.

He knows of a case in which a woman at the third month of supposed normal pregnancy developed pains which were ascribed by her physician to stomach derangement at first and later, on account of the increasing jaundice, to gall-stone trouble. The jaundice kept increasing, and finally, two weeks after the first symptoms, the possibility of intraperitoneal hemorrhage was considered. The laparotomy then on the moribund woman disclosed old and fresh blood in the abdominal cavity. If the jaundice had been recognized as resulting from destruction of blood, the proper diagnosis would have been made long before. Schottmüller has found only hematinemia with simple hemorrhage, while with infectious processes methemoglobinemia was the rule, easily distinguished with the spectroscope. He does not know whether this dif-

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ference is constant. In one case recently, examination of the serum decided whether the symptoms presented by the patient were due to infarct or pneumonia; the hematin in the serum pointed to infarct. With pneumonia he has never found hematin, only bilirubin in the serum.

106. **Serodiagnosis by Dialysis.**—Abderhalden emphasizes a number of points which must be borne in mind in testing the serum for protective ferments, and urges careful record of details as to the tissues used for the test, as this alone will permit instructive comparison of the results. He gives a sample table showing the amount of serum used and each of the different tissues tested in turn, placenta, testicle, ovary, thyroid, thymus, adrenal, brain, liver, kidney, muscle, stomach lining, and liver-cancer tissue, followed by the clinical diagnosis (*a*) and the pathologic-anatomic diagnosis (*b*). In a healthy control there was no digestion of any of the tissues. In case of gastric cancer with metastasis in the liver, liver-cancer tissue and stomach mucosa tissue were the only ones digested. The serum from a pregnant woman with exophthalmic goiter digested placenta, ovary, thyroid and thymus tissue and left all the other tissues unmodified. One patient with exophthalmic goiter, whose ovaries had been removed some time previously, showed a positive response only with thyroid and thymus tissue. The serum from a patient after an accident which had crushed much muscle tissue, digested muscle tissue alone; from a woman with eclampsia, digestion was evident only in placenta, ovary, thyroid, brain and liver tissue; from a case of otitis media with an abscess in the temporal lobe, the only tissue digested was brain tissue. Serum from a man with dementia praecox digested placenta, testicle, ovary and brain tissue, while from another who had long been castrated brain tissue was the only one digested, and serum from a woman with dementia praecox, digested only ovary and brain tissue. He suggests that these protective ferments may be generated normally in the organ involved and be present there at all times; their passage into the blood under the influence of the morbid condition may be the specific anomaly.

110. **Examination of Stools for Pathogenic Microbes.**—Mayer reports the results of systematic examination of the stools of 6,020 troops at Munich and 178 elsewhere, all supposedly healthy and in healthy surroundings. In only three of the Munich men were pathogenic germs found, and in only two among the others. In these men paratyphoid or Flexner dysentery or Y dysentery bacilli were found, and no source for their infection could be discovered. Examination of 1,200 schoolchildren in 1910 showed paratyphoid bacilli in seventy-two. The five infected soldiers were kept away from all service requiring the handling of food but otherwise no distinction was made between them and the other men and no infection of others resulted. This was the case also in Mayer's previous experience with 158 healthy meningococcus carriers found among 9,111 healthy soldiers in 1910. The results of the wholesale examinations reported fail to confirm the assumption that the paratyphoid bacillus is ubiquitous. They reaffirm that in a normal, healthy environment pathogenic germs have little power to affect others. If the troops had been ordered into the field and undergone the privations and stress of a campaign, the five carriers might have proved a dangerous source of infection for others whose resisting powers had been depressed.

112. **Pain in the Groin in Young Men.**—Spoerl states that in dozens of cases in the course of his long practice young men about twenty have applied to him on account of pain in the inguinal region, alarming them as indicating impending hernia. A number had already provided themselves with trusses, but no tendency to hernia could be detected. Spoerl explains the pain as a kind of colic of the spermatic cord associated with neuralgia of the nerve which passes with the spermatic cord through the inguinal canal, and a truss is the worst possible measure in such cases. What is needed is light massage of the region with sedatives internally or in an anal suppository. Local injection of an anesthetic might also prove useful by the infiltration epinephrin technic.

113. **Endemic Goiter.**—This communication from Zurich reaffirms that it is not a fact that Rupperswil has ceased to be a focus for endemic goiter since the water supply was changed. This village has long been cited as the extrême type of a focus of endemic goiter, which was stated to have died out since the water-supply has been derived from a different geologic formation. Recent reexamination of the town disclosed endemic goiter still in 30 per cent. of the inhabitants, including many born since the water-supply was changed. A box of young rats from Zurich (where goiter is never endemic), was taken to Rupperswil and placed in charge of the children in a family in which nearly all the members had goiter. The water-supply was from the geologic formation which Bircher claims is free from goiter-producing properties. The rats were killed seven months and a half after their arrival in Rupperswil; one of the five brought from Zurich had pronounced goiter and three quite a tendency to goiter, while two of the four born since had pronounced, and one a tendency to goiter; the fourth was dubious. This experience apparently disproves the drinking-water theory of the origin of goiter, at least as formulated by Bircher. Another box of rats given in charge of a neighboring, but goiter-free, family, under similar conditions otherwise, gave constantly negative results. A goiter environment—local conditions—must be incriminated rather than the water-supply. (See editorial, February 15, p. 538.)

Therapeutische Monatshefte, Berlin

February, XXVIII, No. 2, pp. 81-156

116 *History and Present Status of Vaccine Therapy. H. Schröder.
117 Progress in Sterilization Technic. (Fortschritte in der Desinfektion.) K. Lauberheimer.
118 *Passage of Drugs Through the Placenta. (Uebergang von Arzneimittel von der Mutter auf den Fetus.) P. Jung.
119 Serotherapy by the Mouth in Suppurative Eye Affections. (Serumfütterung bei eitrigen Augenentzündungen.) R. Solm.
120 Action of Astringents on Gastric Juice and Adsorption of Pepsin. I. Issraeliantz.
121 Acetone Treatment of Inoperable Uterine Cancer. E. Vogt.
122 Misleading Advertisements of Alypin. (Ein "falsches Inserat" über Alypin.) Ruprecht and F. Bruck.

116. **Vaccine Therapy.**—Schröder remarks that we are still far from Wright's prophecy of the physician of the future as "an immunizer." Preventive vaccination against small-pox and typhoid has proved its efficacy but until recently that against diphtheria was of too brief duration for much practical use. He thinks that Behring's new method, injecting a mixture of diphtheria toxin and antitoxin, under the guidance of the antibodies generated, seems very promising not only for diphtheria but for other infectious diseases. Schröder remarks that it may prove possible to utilize virus from sheep-pox or horse-pox or similar diseases, in which case the term "vaccination" would scarcely apply, and we should have to speak of "ovination" and "equinolation." He reminds the opponents of vaccination of the record of the Japanese armies in their two last campaigns in the heart of a country where small-pox is endemic. The Japanese were all thoroughly vaccinated and only 517 out of 1,000,000 soldiers developed small-pox, and only 69 died from it. Referring to bubonic plague, he says that eight millions have died from it in India during the last ten years, and that last year alone, 700,000 persons were given prophylactic inoculations. The experiences in the Dutch East Indies with this have been discouraging; the mortality among the vaccinated has been as high as among the rest of the populace.

The vaccine method of treating cancers—with autolysates—seems so promising that one session was devoted to discussion of it at the international conference on cancer-research at Brussels last August. Vaccine therapy of acne, furunculosis, chronic gonorrhea, etc., combined with other proved measures, seems to surpass in efficacy anything hitherto known. Strubell says it is ripe for adoption by the general practitioner, but Schröder thinks it had better be reserved as yet for institutions; he knows of no reports from general practitioners on record to date. Einsiedel reports 82 per cent. cured and 18 per cent. improved in his cases of furunculosis and in acne 16 per cent. cured and 84 per cent. improved.

Schröder classes under the heading of vaccine therapy Wagner von Jauregg's method of treating progressive paralysis with tuberculin or staphylococcus vaccine with which he and Pilcz have reported apparently encouraging results (as mentioned in abstract 68 above).

118. **Transmission of Drugs Through the Placenta.**—Jung reports in the course of his discussion of this subject three cases in which the children had evidently suffered from the toxic action of narcotics administered to the mothers on account of eclampsia. Two of the children died. The mothers had been given chloral by Stroganoff's prophylactic method of treating eclampsia; the eclampsia did not become severe in any, and the delivery was easy on account of the small size of two of the children; the other died the day before. In two other cases Jung ascribes the death of the fetus to the toxic action of an anesthetic injected by lumbar puncture to permit cesarean section. He says of the scopolamin "twilight sleep" technic, that it has been discarded nearly everywhere now except at Freiburg. The fetus seems to feel the cumulative action of the drugs. Mercury and potassium iodid long since proved their usefulness in this way, but the evidence to date is not conclusive in regard to arsenic and salvarsan. A trial should be made of quinin in case of high fever in the mother, hoping thus to reduce the temperature in the fetus which is liable to die from the hyperthermia; its temperature is normally a little higher than the maternal. Vaccination of the mother against small-pox does not seem to protect the child. Forty-three pregnant women were successfully vaccinated by Palm on an average 115 days before delivery, and thirty-three of their new-born infants vaccinated at once after birth responded positively; five others at the second attempt, and the last one at the fourth. Jung emphasizes in conclusion the necessity for further research to determine what drugs and antitoxins pass through the placenta, and the doses which the mother can take without injuring the fetus.

Zentralblatt für Chirurgie, Leipsic

February 7, XLI, No. 6, pp. 225-272

123 *The After-Pain with Local Anesthesia. F. Honigmann.
124 Ligation of Splenic Artery. (Ligatur der Arteria splenica bei fixierter Wanderniliz.) O. Lanz.
125 Anastomosis between Gall-Bladder and Common Bile Duct. (Die Cysto-Choledochostomie, eine neue Gallenwegverbindung.) H. Wolff.

123. **The After-Pain with Local Anesthesia.**—Honigmann states that in 588 operations under local anesthesia, 32 per cent. of the patients had no pain in the wound afterward, and 43 per cent. had slight or bearable pain, while about 25 per cent. complained of severe pain in the wound. Analysis of the cases shows, however, that the after-pain is experienced usually only when the operation was in inflamed tissues or the parts were stretched or particularly rich in nerves. An operation for an ingrowing nail was followed by severe pain in all but eight of his seventy-four operations of the kind. Women are more subject to the after-pain than men. Honigmann makes a practice now of giving a small subcutaneous injection of morphin before commencing the anesthetization for operations in acutely inflamed tissues or when there is otherwise reason to anticipate much after-pain. This not only wards off the after-pain but helps to tranquilize the patient during the operation. He gives two sedative powders to outpatients, telling them to take one if they begin to feel pain in the wound later, and a second powder at bed-time if absolutely necessary. A milder sedative powder is given to those whose operations are of the kind only exceptionally followed by after-pain.

Zentralblatt für Gynäkologie, Leipsic

February 7, XXXVIII, No. 6, pp. 225-256

126 Dosage in Roentgenotherapy. Gunsett.
127 Means to Prevent Ophthalmia Neonatorum. (Wie kann die Blennorrhoe wirksam verhütet werden?) C. Hörder.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 5, XXXV, No. 16, pp. 161-168

128 *Fatal Santonin Poisoning. E. Magri

128. **Santonin Poisoning.**—A boy of 7 complained of not feeling well during the convalescence of a younger brother from scarlet fever. The mother diagnosed "worms" and gave the child a dose of santonin, probably 0.2 or 0.4 gm. in a little water. Four hours later the child suddenly became unconscious, with mydriasis and convulsions. The set jaws prevented lavage of the stomach, and the child soon succumbed notwithstanding the use of stimulants and oil enemas. Magri concludes his report of the case with the remark that, even at the best, santonin does not kill or expel ascarides but merely paralyzes them, and has no action on other helminths. He knows of the death of a child of 10 after taking 0.2 gm.—about 3 grains; another child 4 years old died from 0.3 gm. given fractioned in six doses.

Policlinico, Rome

February 1, XXI, No. 5, pp. 149-184

129 Caries of the Teeth in Children between Three and Six. (Frequenza di malattie dentali in mille bambini.) A. Chiavaro.
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147 Production of Uric Acid. (Urinsyrens Dannelse hos Mennesket. III.) I. P. Chrom.
148 Child Born with Severe Manifestations of Syphilis Twenty Years after Infection of Mother. H. Boas.

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149 Two Years' Favorable Experience with Albumin Milk in Infant-Feeding. A. Lichtenstein. Commenced in No. 1.
150 *Blotting-Paper Capillary Analysis Test for Gastric Acidity. (Om den Holmgrenska kapillaranalysen.) H. K. Aberg.

150. **Blotting-Paper Test of Gastric Acidity.**—Holmgren's method of determining the proportion of free acid in the gastric content was described in THE JOURNAL 1911, lvi, 857. Aberg here reports extensive research with it striving to simplify and improve the technic. He thinks he has accomplished this by the use of tincture of cochineal for the indicator instead of congo red, as the color reaction is much more distinct and durable with the former. The use of lackmoid permits also accurate estimation of the total acidity, and by diluting the gastric juice even a very small amount will permit accurate findings.